

Citation for Published version: Grabel, Ilene, "Speculation-led Economic Development: A Post-Keynesian Interpretation of Financial Liberalization in the Third World." *International Review of Applied Economics* 9, no. 2 (1995): 127-149.
DOI: <http://dx.doi.org/10.1080/758538249>

SPECULATION-LED ECONOMIC DEVELOPMENT: TOWARD A POST-KEYNESIAN INTERPRETATION OF THE CONSEQUENCES OF FINANCIAL LIBERALIZATION PROGRAMS IN THE THIRD WORLD by Ilene Grabel

I. INTRODUCTION: THE STATUS OF FINANCIAL LIBERALIZATION THEORY

[A]ll is not well in the liberal[ization] camp. The general case favoring financial liberalization has been called into question by a series of bank panics and collapses in the Southern Cone...That this attempted FL generally ended in failure--with an undue build-up of foreign indebtedness and government reintervention to prop up failing domestic banks and industrial enterprises--is well documented. (McKinnon, 1989:100)

Many Latin American and Asian-Pacific countries initiated abrupt and comprehensive financial deregulation programs in the 1970s and 1980s. These "financial liberalization" (FL) programs were undertaken as part of broader liberalization strategies in less developed countries (LDCs). By all accounts these experiments failed to achieve their intended results, especially in the Southern Cone of Latin America and in the Philippines. Instead, they were associated with low levels of productive investment, savings and economic growth, a flourishing of speculative investments, dramatic increases in nonperforming bank loans, and financial crises necessitating government bailouts of failed financial institutions (Diaz-Alejandro, 1985; Gonzales-Arrieta, 1988; Cho and Khatkhate, 1989).

The striking similarity of experience across many countries suggests the need for a unified theoretical explanation of the likely effects of FL, one that can account for these stylized facts. An adequate understanding is also necessitated by the current trend toward liberalization in the former socialist countries (FSCs), and by the continuing sway that the FL hypothesis has today over many economic advisers and policymakers.

The disappointing experiences with FL in LDCs provoked a reconsideration among neoclassicals of the manner in which the earliest FL experiments had been undertaken. McKinnon (1988, 1989, 1991), a pioneer of neoclassical FL theory and policy, has recently begun to reinterpret the disappointing outcomes of the Southern Cone FL experiments through the lense of new-Keynesian theory.□ In a similar vein, Balassa (1990-1), Galbis (1993), and Kapur (1992) emphasize the need to continue temporarily some financial regulations in order to resolve the problems of moral hazard and adverse selection, and the need to institute a healthy macroeconomic environment as preconditions of eventual, successful FL. But despite the twenty year maturation of the neoclassical FL theory, the essential policy implication that derives from the original work of McKinnon (1973) and Shaw (1973) remain intact today.□ Neoclassicals continue to argue that a properly specified and implemented FL program will induce a virtuous cycle of increased savings, investment, and economic growth, and eliminate opportunities for what Bhagwati (1982) terms "directly unproductive profit-seeking" (DUP) activities endemic to government regulation.

In this paper I will argue that the incorporation of new-Keynesian insights into neoclassical theory fails to salvage the case for FL, particularly because it provides an unsatisfactory framework for understanding the FL experiences of the LDCs. As a consequence, it also fails to shed light on the likely outcomes of future FL programs in LDCs or in FSCs.

To date the most complete and sophisticated critique of the FL hypothesis has emerged within structuralist theory. While neoclassicals contend (for reasons cited above) that FL is growth-promoting, structuralists argue that despite variations in specification, implementation, and timing, FL in LDCs is growth-impeding because it induces adverse macroeconomic effects (such as stagflation) and a reduction in the supply of loanable funds (see Taylor, 1991). The post-Keynesian interpretation presented here argues that, despite variations in specification, implementation, and timing, FL is ultimately growth-distorting. This is because these FL programs promote the creation of new opportunities for DUP activities and a corresponding misallocation of credit toward speculative activities, with destabilizing macroeconomic effects. In short, FL is likely to induce what will be called here "speculation-led economic development" characterized by a preponderance of risky investment practices, shaky financial structures, and ultimately by lower rates of real-sector growth than would otherwise prevail.

The alternative perspective presented here incorporates the new-Keynesian concepts of adverse selection and credit rationing into a thoroughly post-Keynesian theoretical framework. It will be argued that this perspective is better able to account for the actual experiences of LDCs with FL, and may also provide a basis for evaluating the likely consequences of nascent FL programs.

The conclusions of the post-Keynesian interpretation of FL are contrasted with those of neoclassical and structuralist theories of FL in figure 1. <<FIGURE 1 HERE>>

The argument advanced here is sufficiently general as to be of relevance to FL in developed countries (DCs) and in FSCs. It is my aim, however, to argue that in the context of resource-scarce LDCs, speculation-led development is a particularly poor foundation for sustained and stable long-term economic growth.

Recently Keynesian and Kaleckian-inspired interpretations of FL experiences in the LDCs have emerged (e.g., Akyuz, 1991; Burkett and Dutt, 1991; Dutt, 1990-1). These accounts acknowledge that unproductive investment may be fueled by FL (e.g., Dutt, 1990-1:229-30). But this insight is under-exploited, as the focus of this work is instead on the effective demand and distributional problems that may attend FL. And while these effective demand and real sector problems are no doubt important (and valid), this earlier work fails to address the central financial concerns raised here. Hence, the work presented here is intended to complement earlier Keynesian- and Kaleckian-inspired treatments of FL.

The paper is organized as follows. Section II reviews briefly the central components of the analytical framework and discusses the methodological issues involved in drawing new-Keynesian insights into a post-Keynesian framework. Section III then puts forth a post-Keynesian interpretation of the consequences of FL programs in LDCs. To the extent possible, the empirical relevance of this framework to the actual experiences of LDCs will be discussed. The paper concludes with a discussion of the implications of this approach for the theory and policy of FL in LDCs and FSCs.

II. THEORETICAL FOUNDATIONS OF SPECULATION-LED ECONOMIC DEVELOPMENT

This analysis relies heavily on the post-Keynesian theory of endogenous expectations formation and the related theory of financial fragility. In addition, the new-Keynesian concepts of adverse selection and credit rationing are appropriated into a post-Keynesian framework. These Keynesian-inspired literatures have been developed to analyze the operation of financial markets in DCs. To date, the insights of these Keynesian literatures have not been

thoroughly absorbed into the financial development literature; nor have models of FL been articulated that incorporate these insights into a post-Keynesian framework.

II.1. Post-Keynesian Theory of Endogenous Expectations Formation and Financial Fragility

Post-Keynesian theory is founded upon the recognition of the endogeneity of expectations formation on the demand- and supply-sides of financial markets.□ The endogeneity of expectations stems from the inherent fundamental uncertainty regarding the present and future expected-return/risk profiles of investment projects. In this context, rational agents are influenced by conventional wisdom in their decision-making. But conventional wisdom is not static. Over the course of the business cycle, for example, agents' evaluations of what constitutes reasonable investments changes, and these changes in conventional wisdom may be mutually validated by the actions of market participants. The pressure to join in a speculative frenzy may stem from agents' evolving boom-euphoric expectations and/or competitive pressures to engage in profit-seeking activities. The combined effects of "expectations-induced" and "competition-coerced" (Crotty, 1993) pressures mean that agents on both sides of the financial market may be drawn to participate in and abet high-risk investment activities. This adventurism, moreover, is likely to be self-propelling: as expectations of profits are realized over time, expectations of the future grow more optimistic, actors grow more secure in their projections and they reduce safety margins (Keynes, 1936; Minsky, 1986:238).

A concrete manifestation of these expectations-induced and competition-coerced market dynamics is what Minsky (1986) identifies as the tendency for financing patterns to become more precarious over the course of the business cycle. As a boom unfolds, agents may move toward "speculative financing," the short-term financing of investment projects with long time horizons. This pattern of financing makes agents vulnerable to credit availability and to interest rate shocks, as the viability of projects comes to depend on favorable short-term interest rates. Hence, the financial system becomes increasingly fragile.

II.2. New-Keynesian Theory of Adverse Selection and Credit Rationing

The informational assumptions of new-Keynesian theory are quite different from those of post-Keynesian theory. In the post-Keynesian view, fundamental uncertainty prevails symmetrically on both the demand- and supply-sides of financial markets. For new-Keynesians, on the other hand, uncertainty is asymmetric in that it prevails only on the supply-side.□ In this view, borrowers are assumed to have perfect knowledge of the expected-return/risk profiles of their projects. But this knowledge of the profile of each individual borrower is not available to lenders. Instead, lenders are assumed to have knowledge of the true probability distribution of risk/return for all borrowers as a group. With this limited knowledge in hand, lenders are able to compute a functional relationship between the loan rate of interest and expected return, taking into account the probability of default.

The asymmetry of information is particularly problematic when interest rates are high. Investment projects for which expected returns (and risk levels) are low are not viable at high borrowing costs, leaving only those projects that have higher expected returns and corresponding high- and low-risk profiles. Thus, under conditions of high interest rates, lenders confront a deterioration in the average "quality" of loan applicants, when measured by the risk profile of their investment projects. In the absence of information that would enable lenders to distinguish between those borrowers with lower- and higher-risk projects, lenders must choose randomly (or, in the presumed case of market clearing, meet all demand emanating) from this "adverse" pool of borrowers. This is known as "adverse selection" (Akerlof, 1970). Implicit in this approach is the assumption that lenders cannot enforce prudent behavior

upon borrowers. The information problem discussed here has particular force in LDCs because of the combined effects of the inexperience of lenders, and the underdevelopment of financial markets and associated technologies which may mean that credit rating firms in LDCs either may not be able to provide accurate information on potential borrowers or simply may not exist (Stiglitz, 1989).

In recognition of the adverse selection problem, lenders are assumed to ration credit. By restricting interest rate increases, lenders attempt to prevent the deterioration in the quality of the borrowing pool. Credit rationing is hence posited as a rational response by risk-neutral lenders to asymmetric information and enforcement problems, which results in a non-Walrasian market equilibrium in which there is an excess demand for credit at the (quoted) market interest rate. The basic static new-Keynesian credit rationing argument is presented in figure 2.□

<<FIGURE 2 HERE>>

Figure 2a presents the loan interest rate/expected return relation in which the expected return on loans falls as the interest rises beyond some critical interest rate, r_c , due to the deterioration in the average quality of the borrower pool. Figure 2b shows that there is an excess demand for loanable funds at the market interest rate.□

II.3. Appropriating Adverse Selection and Credit Rationing into a Post-Keynesian Framework

The idea of speculation-led economic development that is developed in the next section appropriates the new-Keynesian concepts of adverse selection and credit rationing into a post-Keynesian theoretical model. But it may be argued that post- and new-Keynesian theories are fundamentally incompatible. These distinct paradigms have been largely elaborated separately, despite their common theoretical origins in the work of Keynes. They depart most importantly in two respects: in terms of the information they attribute to economic agents, and in terms of their temporal dynamism. One may then ask whether this appropriation can logically be made, and if so, what is to be gained by it?□

On its own, post-Keynesian theory is valuable for its focus on endogenous expectations formation in a dynamic setting that evolves over real time, its ability to handle historical and institutional specificity, and its consideration of the incentive and reward structures that motivate agents. These insights allow us to explain why certain types of investment projects flourish and are validated in some historical moments rather than others. Here, they will guide the effort to specify how economic activity might change in the wake of FL.

The post-Keynesian approach may nevertheless be substantially enriched by the incorporation of the new-Keynesian insight that the quality of the borrower pool and the likelihood of default is related to the price of credit. The functional relationship between the loan rate of interest and the composition of projects brought forward for financing is consistent with a post-Keynesian framework as long as it is understood that this relation is not stable, and that lenders do not have true knowledge of it, even in a probabilistic sense.□ Instead, lenders' assessment of the relationship between current interest rates and future default rates is founded upon conventions and best guesses, which of course change with changing sentiments. Moreover, we must recognize that the actions of lenders actually alters the functional relationship between loan rates and default rates: the tightening of credit at critical junctures may reduce economic activity and profit rates, and thereby undermine the financial solvency of borrowers.

The concept of "dynamic credit rationing" thus provides a microfoundation for the likely response of lenders to the problems associated with lending at high interest rates, one that is not only consistent with post-Keynesian theory, but which contributes to a sharper specification of the demand and supply sides of the credit market. Critically, this incorporation preserves post-Keynesian theory's dynamism, its historical and institutional insights, and its focus on decision-making under conditions of fundamental uncertainty.

III. SPECULATION-LED DEVELOPMENT: A POST-KEYNESIAN INTERPRETATION OF FL

The FL programs implemented in LDCs have had three main components: an increase in real deposit and loan interest rates to their free market level; the deregulation of existing financial institutions, and especially the dismantling of channels of governmental influence over credit allocation; and the creation of new types of privately-owned financial institutions, instruments, and markets.□ These changes may have important demand- and supply-side effects. For clarity of exposition, we will consider each of these related effects in turn.

III.1. Demand-side Effects

The regulatory and institutional changes wrought by FL are likely to effect three mutually reinforcing developments on the demand-side of financial markets: 1) higher loan interest rates attract an adverse class of borrowers; 2) institutional innovations generate new opportunities for short-term, speculative investment practices, which will be exploited by a broad class of investors; and 3) the interest rate spread is likely to increase, biasing investment toward short-term speculative investments.

III.1.a. High interest rates

Drawing on new-Keynesian theory, it can be seen that the high cost of borrowing, coupled with the institutional changes that attend FL, may affect the composition (and volume) of investment projects undertaken. For simplicity, and as a first approximation, we assume that investment projects may be broadly classified as having three possible risk/expected-return profiles: low expected-return/low-risk (type A), high expected-return/low-risk (type B), high expected-return/high-risk (type C). This typology of investment projects is presented in figure 3.□

<<FIGURE 3 HERE>>

An important change in the composition of investment projects occurs with FL and the concomitant increase in interest rates. High borrowing costs will discourage all but type B and C investment projects. In other words, type A or "prudent" projects are no longer viable at high loan rates (given their low expected return). The types of investment projects that are viable under FL are represented in figure 4.

<<FIGURE 4 HERE>>

Given the changes in the composition of projects that remain viable under high interest rates, lenders are faced with a deterioration in the average quality of the borrower pool. This result is not dependent upon assumptions regarding asymmetric information, but rather is an outcome of changes in the cost of loanable funds. This adverse pool of projects might include various forms of speculative activities such as leveraged buyouts of industrial enterprises and secondary and tertiary financial investments, and generally what Minsky (1986) might refer to as Ponzi finance schemes. In summary, the likelihood that lenders issue credit to borrowers with type C projects increases following FL. It should be noted that this deterioration in the quality of the borrower pool following dramatic increases in the real loan rate of interest has been widely noted in empirical examinations of Southern Cone and Asian FL experiences (e.g., Diaz-Alejandro, 1985; Urrutia, 1988).

In the new-Keynesian view, credit rationing would be expected to emerge in this context. However, a post-Keynesian interpretation of credit rationing allows us to see that lenders either might not ration credit or they might decrease the degree of rationing as their expectations evolve endogenously in the context of a speculative boom (see discussion of supply-side dynamics below).

III.1.b. Institutional innovations and speculation

Modern financial markets are especially prone to speculation and short-term trading (see Carter, 1991-2). Investors are encouraged to part with capital by virtue of the apparent security afforded by liquidity (Keynes, 1936). Financial instruments afford the apparent protection of instantaneous withdrawal of funds by transforming illiquid real sector investments in plant and equipment into financial claims that can trade hands as quickly as the institutional and technological structures permit. This liquidity also allows each investor to shuffle ownership among competing assets in response to changes in moods, rumors, etc. The ability to "churn" assets in this way, coupled with the ability to flee all such instruments for money, provides a degree of apparent security to the financial investor that is not available to the industrial corporation that has undertaken long-term capital investment.

The liquidity of financial markets also amplifies the tendency for changes in market valuations. Hence, the rewards for successful financial trading can be immediate and large. The successful investor can realize substantial gains by anticipating (or even better, influencing) future sentiments of other market participants. Indeed, the proliferation of liquid financial instruments expands these opportunities, as they expand the possibilities for the churning of assets within financial portfolios. Every change of sentiment creates new

opportunities to outguess the market, to buy the favored instrument the day before other market participants reshuffle their assets.

A corollary of these opportunities, of course, is the diminution of the duration of financial "commitments." The relative independence of financial asset values from underlying "fundamentals" imparts an extreme variability to these values. Indeed, the successful financial investor need be little concerned with the long-term profitability of the firms whose equities she buys and sells (especially, of course, to the degree that new forms of instruments appear that bundle equities of diverse corporations, or that depend on future commodity valuations, etc.) (Keynes, 1936:ch.12).

But these same attributes ensure that market participants will be driven to shorten their time horizons for defensive purposes as well. The same forces that reward the player who anticipates market behavior penalizes severely the investor who lags behind, who acts only after a new mood or hunch has materialized in the market. The laggard is forcibly reminded that the apparent security which extreme liquidity provides for any individual investor to flee to money evaporates in the context of a general flight. The net effect may be to punish the investor who takes a long-term view.

With these attributes of financial markets in mind, it is apparent that the flowering of instruments and institutions that accompany the "regime shift" to FL expands and exacerbates type C investment opportunities. The financial deepening that attends FL expands these opportunities precisely by creating instruments that transform ownership of claims on illiquid real assets into extremely liquid positions, and by installing institutions and technologies that facilitate the trading of such assets. Certainly, then, FL amplifies the pressure to speculate as the opposite side of the coin that expands the opportunity to do so.□

The dramatic changes heralded by FL, moreover, represent a regime shift of the sort that is likely to be associated with ruptures in the structure of conventional wisdom regarding investment risk.□ Under such circumstances, market participants look out on an as yet un-lived "new era" which promises greater reward and lower risk. Thus, a more sanguine evaluation of type C projects may be expectations-induced. In this manner, type C projects can come to play a more important role in the economy's aggregate investment portfolio.

Combined with this expectations-induced move toward type C projects, there is likely to be an element of competition-coerced profit-seeking among financial and erstwhile non-financial corporations. Both types of firms, ranging (for example) from insurance to industrial manufacturing enterprises, may feel compelled to chase the higher returns apparently available through financial speculation, and they may come to divert resources from their primary activities to the financial arena. Such practices may be seen by corporate managers either as a substitute for the corporation's traditional economic activity, or indeed as a strategy designed to enhance the firm's financial position precisely to further its competitive position within its traditional sector. In either event, a critical manifestation of the new mood among market participants is increasing borrowing to finance short-term financial speculation. The net effect of these demand-side changes is a preponderance of type C investments. This preponderance has been a universally noted phenomenon in the Southern Cone, Philippine, Indonesian, Malaysian and Turkish FL experiments (see Sundararajan and Balino, 1991; Cho and Khatkhate, 1989; Ramos, 1986; Rittenberg, 1990; World Bank, 1989). These occurrences are reflected in run-ups in stock and real estate price indexes and the mushrooming of Ponzi and secondary and tertiary-type investment activities during these experiences.

III.1.c. Increasing interest rate spread

It is necessary to consider in greater detail the typology of investment projects developed previously (see figure 4). We can further distinguish between those projects with long-term horizons and low liquidity, and those with

short-term horizons and high liquidity. This, of course, separates the real sector investment in plant and equipment (necessarily by non-financial firms) from financial sector investment (by financial or non-financial firms, or individuals) in the context of liquid financial markets. While financial sector investments are not always independent of real sector investments, real sector investments tend to be less liquid and have longer gestation periods than financial investments. To the degree that the financial sector is more prone to speculation (and consequent asset price fluctuations) than the real sector (for the reasons explored above), this typology correlates with the former: here type B projects are now seen to be those with long-term horizons, and type C those with short-term horizons. This modified typology is presented in figure 5.

<<FIGURE 5 HERE>>

Until now, we have treated the interest rate effect of FL somewhat summarily. It now remains to investigate this issue in more detail. There are two mutually reinforcing reasons for expecting the changes wrought by FL to increase the spread between long and short-term lending rates, as well as the mean lending rate. First, to the degree that the financial sector becomes a site of increased speculative activity, and that this activity increases relative to total economic activity, there is likely to be a consequent increase in financial asset price volatility (see Gabel, 1993). Under these circumstances, banks may be expected to value less securely the assets put up as collateral by prospective borrowers. Hence, ceteris paribus, banks will be expected to exact a higher risk premium in the form of higher interest rates, especially in the case of long-term debt. Non-financial corporations that seek long-term financing directly through the issuance of bonds are also likely to pay this risk premium, as purchasers demand protection from increased volatility.

Second, in the course of a euphoric boom marked by volatility, bankers may be expected to develop a preference for short-term lending so that they will recoup the funds quickly in order to be able to take advantage of the new investment opportunities that are expected to present themselves in the immediate future. Short-term lending also provides better protection against the cost effects of any future increases in the market deposit interest rate that follows from increased competition for funds. In sum, there is good reason to expect the spread to rise in the wake of FL.

To the extent that limited medium and longer term credit existed prior to FL programs in LDCs, there is some evidence that its real cost did rise more rapidly than that of short-term credit (Urrutia, 1988; Cho and Khatkhate 1989). This may have reflected both the requirement of a risk premium on long-term lending in an environment of increased volatility and uncertainty as well as changes in lenders' preferences toward short-term financial activities (Federer 1993). But insofar as most long-term credit was subsidized and allocated by the government prior to FL, it is difficult to assess empirically the precise degree to which changes in expectations and risk premia, rather than the government's decreasing participation in financial markets, accounts for this change.

To the degree that these forces combine to increase the spread, we should expect to find projects of type C flourishing at the expense of those of type B. This follows directly from the fact that the demand for credit by type C borrowers is less long-term interest rate elastic (than that of type B borrowers) as a consequence of their shorter time horizon. Non-financial firms will find it increasingly expensive to secure financing for capital formation; they might be expected to respond by cutting back on the demand for credit altogether or shifting their use of borrowed funds to type C activities. Alternatively, such firms might be induced by the rising spread (or, to the degree that it occurs, by credit rationing in this market) to seek funds in the short-term market to finance long-term investment projects (see Minsky, 1986).

But this increases the susceptibility of real-sector investment to interest rate shocks, as the continuance of the project comes to depend on favorable short-term rates. This exposes even type B projects to increasing risk. In this limited sense, type B projects are transformed into type Cs. Hence, the consequence arises of increasing real-sector fragility. Together, these changes suggest that there are strong demand side forces inducing development to become what I call "speculation-led."

There may very well be times when boom-euphoric expectations lead to a reduction of the spread (perhaps because banks may overvalue collateral) as a result of the growing optimism about long-term economic prospects. This, of course, was among Keynes' central insights. The "volatility effect" presented here would operate in the opposite direction. At any particular moment, optimism might outweigh volatility, or vice versa. The relative magnitudes of these opposing effects would likely depend on recent history (e.g., how recently and how badly investors were punished by volatility in asset prices, vs. how long the boom has been underway). When optimism does outweigh volatility, the spread will not rise. In this context, the arguments relating to speculation-led development are not compromised. The increased fragility of the macroeconomy still obtains due to the other demand-side changes discussed previously. To the degree that the volatility effect, in some institutional contexts and historical moments, outweighs the optimism effect, the likelihood of speculation-led development is reinforced.

III.2. Supply-side Effects

The supply-side of the story remains to be specified. Why would lenders choose to validate the "animal spirits" of this adverse class of borrowers in the context of a regime shift to FL? Three reasons will be offered here separately; these will then be drawn together in a dynamic argument.

III.2.a. Conventional wisdom and the critical interest rate

Once one adopts a post-Keynesian approach to new-Keynesian credit rationing it is evident that the degree of lenders' credit rationing may change endogenously as conventional wisdom and institutional structures evolve. Credit rationing is then an historically dynamic process.□ Dynamic credit rationing thus represents a post-Keynesian appropriation of the new-Keynesian credit rationing insights.

Given the combined effects of expectations-induced changes in lending practices and the availability of new instruments and practices fostered by FL, there is likely to be an upward adjustment in the critical interest rate (potentially causing a decrease in the degree of credit rationing) in the aftermath of FL. In the context of boom-euphoric expectations, lenders are likely to increase the (critical) interest rate at which they expect returns on loans to fall because of increasing defaults. This buoyancy in lenders' expectations during the FL experiments has been widely noted (Diaz-Alejandro, 1985; Cho and Khatkhate, 1989).□ This dynamic view of lenders' credit rationing is represented in figure 6.

<<FIGURE 6 HERE>>

As figure 6a shows, lenders' expected return/interest rate relation shifts as expectations evolve endogenously and the institutional climate changes. Figure 6b, which depicts the supply and demand for credit, also shifts, as expectations of lenders and borrowers evolve. R1 represents the interest rate/expected return curve that obtains in "normal times." Note that even in normal times there may be some excess demand for credit because asymmetric information might inhibit some lending by risk neutral lenders. R2 depicts a boom, such as that which may be fostered by FL. Here lenders have substantially increased the critical interest rate. Moreover, both the supply of and demand for credit increases as both lenders and borrowers seek to exploit perceived profit

opportunities. Under these circumstances the likelihood that credit will actually be rationed is diminished.

III.2.b. Competition-coerced lending

Combined with the expectations-induced changes in credit rationing behavior discussed above, the competitive pressures unleashed by deregulation serve to dampen credit rationing (Keynes, 1936; Minsky, 1986). A financial institution that does not validate the new speculative activities in the context of a boom may face slower growth of its capital base and a loss of market share. Financial institutions are compelled to finance investment projects and to reduce their reserve margins in ways that might be unacceptable in a less competitive climate. In this context, even formerly prudent financial institutions may be impelled toward speculative financing. These institutions may also be driven to abandon financing of real-sector activities.□

III.2.c. Internal incentive structures and risk

These market pressures are reflected internally in firms in what Crotty (1990) terms the "asymmetric reward structure." In the context of financial institutions, the asymmetric reward structure means that lenders/money managers are "rewarded" for riding speculative waves and indeed are compelled to engage in these activities in order to cement their institutional positions. Additionally, implicit or explicit government bailouts of failed financial institutions may provide an additional incentive for adventurism by lenders (and even borrowers) during the boom.

III.3. A Post-Keynesian Interpretation of FL

In summary, the regime shift to FL is likely to effect important changes on the demand- and supply-sides of the economy. On the demand-side, the risk profile of the projects presented for financing increases due to the adverse selection and enforcement problems (which are exacerbated by lending under high interest rates). Compounding this deterioration of the borrower pool is the increasing institutional opportunities for type C projects, coupled with the expectations-induced and competition-coerced motivations for pursuing them. In addition, the increasing interest rate spread, a consequence of the increasing volatility of asset prices and the concomitant decline in the security of collateral, may discourage type B investment projects (which are relatively elastic with respect to long-term interest rates) or transform them into type C projects through changes in financing patterns.

At the same time, supply-side changes combine to compel lenders to validate and encourage the adverse class of investment projects likely to flourish following FL. Specifically, the shift in conventional wisdom regarding lending practices, boom-euphoric expectations, and the increasingly competitive climate of the financial sector combine to reduce the degree of credit rationing following FL. Moreover, the tendency for type C projects to dominate type B projects will be exacerbated and reinforced by the asymmetric reward structure internal to lending institutions. In the context of FL, then, the economy's aggregate risk profile increases and speculative investment projects come to dominate other types of projects. This is consistent with the stylized facts of the actual experiences of LDCs with FL in the 1970s and 1980s.

Note, however, that when the speculative bubble (depicted in figure 6) ultimately collapses, perhaps because lenders begin to experience difficulties as projects fail to generate expected returns, borrowers may witness a dramatic reduction in the critical interest rate, with the effect of a sudden rationing of credit. Figure 7 represents the period following the collapse of the speculative bubble.

<<FIGURE 7 HERE>>

In figure 7a, R3 represents the interest rate/expected return relation in the context of a collapse. In this situation, the critical interest rate falls and loanable funds begin to dry up, reflecting lenders' increased conservatism. If the decline in the supply of credit precedes the decline in the demand for credit, lender pessimism will increase the chances that credit will be rationed

at precisely that point when it is most needed by distressed borrowers in order to avert collapse.□ This effect on credit supply has been documented in the case of the failed LDC experiments (Urrutia, 1988; Cho and Khatkhate, 1989). Hence, appropriating the new-Keynesian theory of credit rationing into a dynamic post-Keynesian model, we are in a position to see why in fact the behavior of lenders might exacerbate a bust that follows the collapse of a speculative bubble.

IV. CONSEQUENCES OF SPECULATION-LED ECONOMIC DEVELOPMENT

There are several likely consequences of the speculation-led development following FL. The first is that the economy is forced to bear a greater degree of risk than it would in the absence of FL, as a result of the preponderance of type C investments (cf. DeLong, Shleifer, Summers, and Waldmann (DSSW), 1989:681; Snowden, 1987). This preponderance makes the returns on all assets more risky, and hence reduces the total volume of investment with concomitant multiplier effects on economic activity (cf., Federer 1993), while exerting upward pressure on interest rates in order to justify the increase in risk (DSSW, 1989:687). This increase in the economy's ambient level of risk during actual LDC FL experiments may be one factor accounting for the decline in overall investment in this period.

The second likely consequence of speculation-led development is that the economy becomes more susceptible to financial crises, with disruptive spillover effects in the real sector (cf. DSSW, 1989:687). A variety of "surprise" macroeconomic events (e.g., a sudden rise in interest rates) can ultimately threaten the fragile financial structure, leading to bank distress and loan defaults (Wolfson, 1986, 1990). In this context, expectations regarding profitability may become less sanguine, and banks may cut back on lending in lock step, inaugurating a "credit crunch" with deleterious consequences for aggregate economic activity. It is in this manner that the real sector is forced to pay a high price for FL (Minsky, 1986). The wave of bank collapses and lending cutbacks that marked the end of most LDC FL experiments (especially in the Southern Cone) may be a case in point (see Sundararajan and Balino, 1991).

Third, the economy may be forced to bear an increase in DUP activity. Even if one concedes the neoclassical view that speculation is both privately profitable and price stabilizing, speculative activities may nevertheless be resource-wasting in the short run as long as real resources are expended on garnering returns from speculation (see Kemp and Sinn, 1990; Murphy, Shleifer and Vishny, 1990:5). If the social costs outweigh the private gains from speculation, then these activities may be conceptualized as DUPs (in Bhagwati's sense), since they do not directly increase the flow of new goods and services in the short run.□ Contra neoclassical political economy, removing the government from financial markets may induce new DUPs as private sector agents expend resources in seeking out profitable opportunities for speculative trading. This rise in the proportion of DUP to non-DUP activity has been widely noted in the case of the actual LDC FL experiences (see Ramos, 1986; Diaz-Alejandro, 1985; Cho and Khatkhate, 1989).

The post-Keynesian recognition of the possibility of unemployed resources in an economy may lead to the conclusion that DUP activity--which promotes increased aggregate demand--is not altogether undesirable. But we should be mindful that a DUPs-dependent regime creates economic interests that are not likely to disappear on cue with the attainment of full employment. Hence, the macroeconomy becomes more wasteful precisely as it tends toward full employment. Moreover, if we are concerned with the character of resource use as well as its level, as we should be, then we should seek regimes that minimize the role of DUPs in periods of under and full employment.

Fourth and finally, low-risk, low-expected return investment projects with long time horizons are likely to be discouraged following FL. On the one hand,

high borrowing costs undermine the viability of type A investment projects. On the other, the pressures and rewards brought to bear on the demand- and supply-sides of the market may deprive type B investments of the financing they would have received in the absence of FL. Coupled with this relative increase in type C investments, there may also be an absolute increase in these investments emanating from the institutional and competitive climate wrought by FL. Thus, credit may be misallocated to the detriment of long-term economic growth. Indeed, it is widely recognized that the direction of credit away from long-term real sector projects during FL in LDCs undermined the conditions for long-term economic growth.

V. IMPLICATIONS FOR THE THEORY AND POLICY OF FINANCIAL LIBERALIZATION IN LDCs AND FSCs

The interpretation advanced here of the likely consequences of FL programs is able to explain the key stylized facts of the experiences of Southern Cone and many Asian-Pacific countries (especially the Philippines) with FL. Specifically, it can account theoretically for the actual preponderance of high risk, short-time horizon investment activities, the rise of secondary and tertiary financial sector activities, the low level of real sector investment, and the financial crises and general macroeconomic instability that accompanied these experiences with FL. It may also be the case that this approach is sufficiently general as to be relevant in accounting for the experiences with FL of DCs and FSCs.

If the arguments presented here are correct, then FL is likely to distort the character of economic development and will fail to provide the conditions for stable and sustained real sector development. This implies that FL programs should not be part of LDC or FSC strategy.

The question arises as to whether the adverse effects of FL considered here are inevitable. Certainly, the existence of non-governmental institutions in the economy that perform the function of credit allocation to industrial investment through channels other than strict market (or arms-length) mediation could serve to insulate firms and/or sectors from increased financial volatility and instability.□ The performance of the Japanese keiretsu over the past decade is instructive in this regard. Industrial investment in Japan has suffered surprisingly little from the immense financial turbulence of this period, in part due to what Porter (1992) terms the "dedicated" nature of investment capital in the keiretsu. Paradoxically, such extra-market institutional relations may be thought of as the private sector analogue of the public sector regime that the FL prescription is designed to eliminate. It may very well be that this arrangement--of liberalized finance coupled with extra-market private investment institutions--is therefore practically incompatible and ultimately unsustainable.

The critique of FL developed here does not in and of itself call forth a particular alternative regime. It does not follow, for example, that the only option available is a return to the previous regime of "financial repression." Rather, the regulatory options available to financial policymakers are vast and nuanced. The challenge ahead is to discover and explore alternative regulatory regimes which are compatible with broader developmental and social objectives in LDCs and FSCs alike.

Figure 1. Neoclassical, structuralist, and post-Keynesian interpretations of the effects of financial liberalization in LDCs.

Neoclassical perspective

A properly specified, implemented, and timed FL program: (1) induces a virtuous cycle of increased savings, investment, and economic growth; (2) eliminates opportunities for directly unproductive profit-seeking behaviors endemic to government regulation; and (3) is growth-promoting.

Structuralist perspective

Regardless of specification, implementation, and timing, a program of FL: (1) induces a vicious cycle of stagflation; (2) reduces the availability of loanable funds; and (3) is growth-impeding.

Post-Keynesian perspective ("Speculation-led economic development")

Regardless of specification, implementation, and timing, a program of FL: (1) induces risky investment practices, shaky financial structures, and ultimately by lower rates of real-sector growth than would prevail in the absence of liberalization; (2) introduces new opportunities for directly unproductive profit-seeking activities; and (3) is growth-distorting.

Figure 3. Typology of investment projects, pre-financial liberalization.

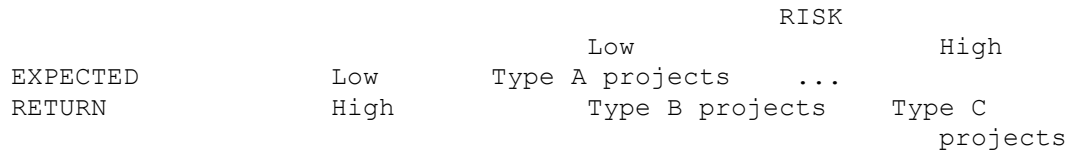


Figure 4. Typology of investment projects, post-financial liberalization.

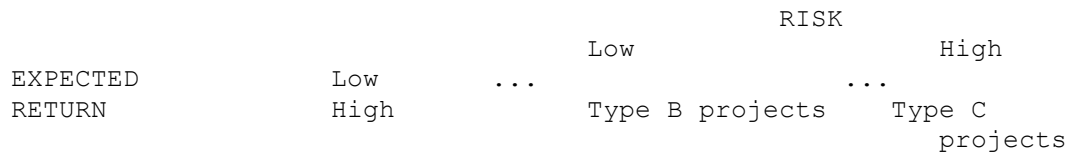


Figure 5. Typology of investment projects (with time horizons), post-financial liberalization.

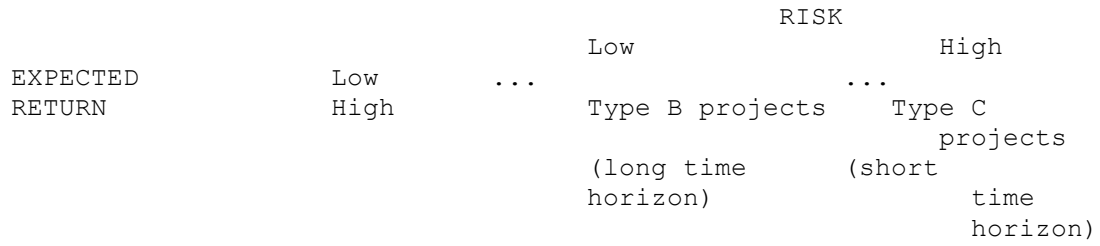
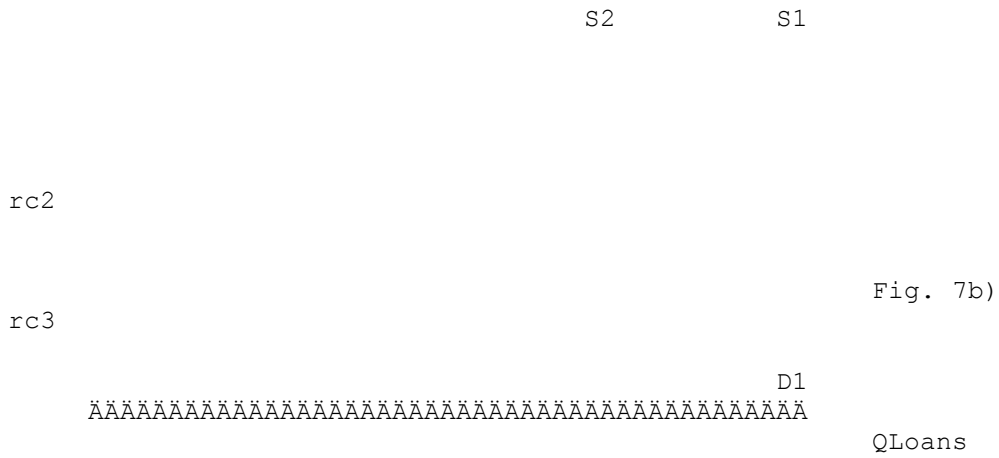
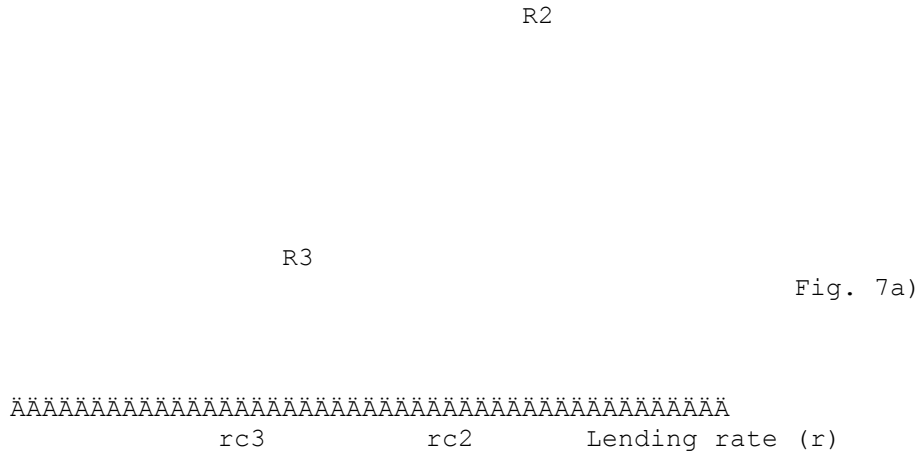


Figure 7. Dynamic credit rationing following the collapse of a speculative boom.

Lenders' expected return (R)



D1
 ~~~~~

NOTES

\* I am especially indebted to James Crotty, Gerald Epstein, and J. Mohan Rao for their comments on earlier versions of this paper. I also wish to thank Paul Burkett, George DeMartino, Gary Dymski, Don Goldstein, David Levine, Eric Nilsson, Bob Pollin, Ellen Tierney, Howard Wachtel, and participants in the GSIS faculty seminar for their comments.

□ Similarly, economists have begun to extend other aspects of new-Keynesian theory to LDC experiences (e.g., Corden, 1987; Dornbusch, 1990; Stiglitz, 1989).

□ A history of neoclassical FL theory and policy is outside the scope of this paper, but see Grabel (1994a).

□ The methodological issues associated with the incorporation into a post-Keynesian framework of new-Keynesian concepts are significant. These issues are addressed below.

□ These real sector issues are not addressed directly here.

□ The post-Keynesian insights incorporated herein are developed explicitly in Keynes (1936:ch. 12) and Minsky (1986). See also Crotty (1990) and Davidson (1991).

□ An excellent survey of the new-Keynesian theory of financial markets appears in Stiglitz (1987).

□ To date, the credit rationing literature has largely presented a static account of lending in an environment of imperfect information. The exceptions to this are discussed below.

□ Note that Stiglitz (1987) uses a backward bending supply curve for loans. This approach is not followed here because lenders do not supply credit at interest rates beyond  $r_c$ . Hence in the credit rationing diagrams included here, the points on the supply curve above  $r_c$  should not be taken as effective supply loci, in that they can not obtain in the face of credit rationing.

□ Fazzari (1991) also makes a case for drawing some new-Keynesian insights into an abstract post-Keynesian framework.

□ In fact, in a post-Keynesian framework, even borrowers do not have perfect information regarding their project's risk/expected-return profiles. I thank James Crotty for this point.

□ In addition, the capital account has, in most cases, been opened. The likely effects of this opening are not addressed here, but they would exacerbate the problems identified.

□ A similar classification of labor market participants appears in Stiglitz (1987:10-11).

□ The relationship between financial and real investments should be made clear. While the "new issues" equity and bond markets are often (but not always) coterminous with real investment by industrial corporations, secondary and tertiary markets are not necessarily directly (or even indirectly) related to real investment. While both new issues and secondary market activity increase with FL, the secondary market experiences more dramatic growth and "deepening" and tends to become a site of increased short-term trading. Thus, FL may be expected to induce a dramatic increase in financial sector activities that are not directly related to real sector investment.

□ This point is explicit in the work of the previously cited post-Keynesians.

□ Certainly, financial instruments are by no means necessarily short-term by definition. A long-term bond is but one example of a long-term financial commitment. But while the obligation of the issuer of the bond is necessarily long-term, the commitment of the purchaser is not so constrained provided a developed financial market exists.

□ The following arguments presume that the spread is also affected by expectations concerning future short-term interest (and inflation) rates and lenders' liquidity preferences, in accordance with traditional expectations and liquidity premia hypotheses of the term structure of interest rates (Cox, Ingersoll and Ross, 1981).

□ It should be noted that there have been other attempts to develop a dynamic understanding of credit rationing. Jaffee and Stiglitz (1990:215-6) and Stiglitz (1987:13-14) acknowledge that lenders' expectations regarding investment returns may shift during a recession, and this shift may affect the supply of credit. They do not explore this, however, and hence they fail to

produce a theory of endogenous expectations formation. Guttentag and Herring (1984) also argue that lenders' credit rationing may evolve as expectations change. But they do not pursue dynamic credit rationing in the context of the triggering mechanism of FL.

□ Note, however, that empirical tests of credit rationing in the LDC context have not been undertaken. In the DC context, the results of such tests are inconclusive (see Driscoll, 1991).

□ In the Southern Cone FL experiments an additional factor leading to the validation of borrowers' adventurism was the existence of financial industrial complexes, called "grupos," which joined lenders and borrowers within the same institution (see Burkett and Dutt, 1991).

□ In the face of distress at the outset of collapse, borrowers might initially increase their demand for credit in order to compensate for a shortfall in returns (in a manner analogous to Wolfson's (1986) "necessitous demand for credit"). In this case, we might expect a dramatic increase in interest rates (not shown in figure 7b) followed immediately by particularly severe credit rationing.

□ This is especially the case when the majority of financial trading is in the secondary rather than the new issues market. Whether the increased income that may emanate from DUP activity in the short run eventually results in higher levels of productive activity is unclear. Under a FL regime it is not at all evident that the increased income flowing from DUPs will be expended on non-DUP (i.e., productive) activities.

□ This issue is explored at length in Grabel (1994b).

1¾«€=D D G H H NORMAL.STY  
EPSONLQ1I@>K E D F μ

#### REFERENCES

- Akerlof, G. A. 1970: The market for 'lemons': Quality uncertainty and the market mechanism. *Quarterly Journal of Economics* 84(3), 488-500.
- Akyuz, Y. 1991: Financial liberalization in developing countries: A Neo-keynesian approach. UNCTAD, Discussion Paper No. 36.
- Balassa, B. 1990-1: Financial liberalization in developing countries. *Studies in Comparative International Development* 25(4), 56-70.
- Bhagwati, J. 1982: Directly unproductive profit-seeking activities. *Journal of Political Economy* 90(5), 998-1002.
- Burkett, P. and A. K. Dutt. 1991: Interest rate policy, effective demand, and growth in LDCs. *International Review of Applied Economics*, 5(2), 127-53.
- Carter, M. 1991-2: Uncertainty, liquidity and speculation: A Keynesian perspective on financial innovation in debt markets. *Journal of Post Keynesian Economics* 14(2), 169-182.
- Cho, Y. J. and D. Khatkhate. 1989: Lessons of financial liberalization in Asia: A comparative study. World Bank discussion paper, No. 50.
- Corden, M. 1987: The relevance for developing countries of recent developments in macroeconomic theory. *World Bank Research Observer* 2(2), 171-188.
- Cox, J., J. Ingersoll and S. Ross. 1981: A Re-examination of traditional hypotheses about the term structure of interest rates. *Journal of Finance* 36(4), 769-799.
- Crotty, J. 1993: Rethinking Marxian Investment Theory: Keynes-Minsky Instability, Competitive Regime Shifts, and Coerced Investment. *Review of Radical Political Economics* 25(1), 1-26.
- . 1990: Keynes on true uncertainty, conventional decision-making and instability of the capitalist growth process. Mimeo, University of Massachusetts, Department of economics.
- Davidson, P. 1991: Is probability theory relevant for uncertainty? A Post-Keynesian perspective. *Journal of Economic Perspectives* 5(1), 129-44.
- De Long, J. B., A. Shleifer, L. H. Summers and R. J. Waldmann (DSSW). 1989: The size and incidence of the losses from noise trading. *Journal of Finance* XLIV(3), 681-696.
- Diaz-Alejandro, C. 1985: Good-bye financial repression, hello financial crash. *Journal of Development Economics* 19, 1-24.
- Dornbusch, R. 1990: The new classical macroeconomics and stabilization policy. *American Economic Association Papers and Proceedings* 80(2), 143-147.
- Driscoll, M. 1991: Deregulation, credit rationing, financial fragility and economic performance. OECD department of economics and statistics, working paper, No. 97.
- Dutt, A. 1990-91: Interest rate policy in LDCs: A Post-Keynesian view. *Journal of Post Keynesian Economics* 13(2), 210-232.
- Fazzari, S. 1992: Keynesian theories of investment and finance: Neo, post, and new. In Fazzari, S. and D. Papadimitriou, eds., *Financial conditions and macroeconomic performance*. Armonk, NY: ME Sharpe, 121-32.
- Federer, P. 1993: The impact of uncertainty on aggregate investment spending: An empirical analysis. *Journal of Money, Credit, and Banking*. 25(1), 30-45.
- Galbis, V. 1993: High real interest rates under financial liberalization: Is there a problem?" IMF working paper, No. 7.
- Gonzales-Arrieta, G. M. 1988: Interest rates, savings, and growth in LDCs: An assessment of recent empirical evidence. *World Development* 16(5), 589-605.
- Grabel, I. 1994a: The political economy of theories of 'optimal' financial repression: A critique. *Review of radical political economics*, forthcoming.
- . 1994b: Saving and the financing of productive investment: The importance of national financial complexes. Mimeo, University of Denver, Graduate school of international studies.



---. 1993: An examination of stock market volatility in liberalized Latin American and Asian countries. Mimeo.

Guttentag, Jack and Richard Herring. 1984: Credit rationing and financial disorder. *Journal of Finance* 32(5), 1359-82.

Jaffe, D. and J. Stiglitz. 1990: Credit rationing. In Friedman, B. and F. Hahn, eds., *Handbook on monetary economics*, vol. I, Amsterdam: North-Holland, 211-252.

Kapur, B. 1992: Formal and informal financial markets and the neostructuralist critique of the financial liberalization strategy in less developed countries. *Journal of development economics* 38, 63-77.

Kemp, M. and Hans-Werner Sinn. 1990: A simple model of useless speculation. NBER Working Paper, No. 3513.

Keynes, J. M. 1936: *The general theory of employment, interest, and money*. NY: Harcourt Brace Jovanovich.

McKinnon, R. I. 1991: *The order of economic liberalization: Financial control in the transition to a market economy*. Baltimore: Johns Hopkins University.

----.1989: Macroeconomic instability and moral hazard in banking in a liberalizing economy. In Brock, P., M. Connolly and C. Gonzalez-Vega, eds., *Latin American debt and adjustment*, New York: Praeger, 99-111.

---. 1988: *Financial liberalization and economic development: A reassessment of interest-rate policies in Asia and Latin America*. International center for economic growth.

---. 1973: *Money and capital in economic development*. Washington, DC: Brookings Institution.

Minsky, H. P. 1986: *Stabilizing an unstable economy*. New Haven: Yale University.

Murphy, K., A. Shleifer and R. W. Vishny. 1990: The allocation of talent: Implications for growth. NBER Working Paper No. 3530.

Porter, M. 1992: *Capital choices: Changing the way America invests in industry*: Council on competitiveness.

Rittenberg, L. 1990: Investment spending and interest rate policy: The case of financial liberalization in Turkey. *Journal of Development Studies*, 151-67.

Shaw, E. S. 1973: *Financial deepening in economic development*. NY: Oxford University Press.

Snowden, P. 1987: Financial market liberalisation in LDCs. *Journal of Development Studies* 24(1), 83-93.

Stiglitz, J. 1989: Financial markets and development. *Oxford Review of Economic Policy* 5(4), 55-68.

----. 1987: The dependency of quality on price. *Journal of Economic Literature* XXV, 2-48.

Sundararajan, B. and T. Balino, eds. 1991: *Banking crises: Cases and issues*. Washington, DC:IMF.

Ramos, J. 1986: *Neoconservative economics in the Southern Cone of Latin America*. Baltimore: Johns Hopkins University.

Taylor, L. 1991: *Lectures on structuralist macroeconomics*. Cambridge, MIT Press.

Urrutia, M., ed. 1988: *Financial liberalization and the internal structure of capital in Asia and Latin America*. Hong Kong: UN University.

Wolfson, M. H. 1990: The causes of financial instability. *Journal of Post Keynesian Economics* 12(3), 333-355.

----.1986: *Financial Crises*. Armonk: M. E. Sharpe.

World Bank. 1989: *World Development Report, 1989*. NY: Oxford University.

