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Financialization, Rentier Interests, and Central Bank Policy

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Abstract

"Financialization" refers to the increasing importance of financial markets, financial motives, financial institutions, and financial elites in the operations of the economy and its governing institutions, both at the national and international levels. This paper considers one aspect of financialization: the increased use by central banks of "inflation targeting". An extensive review of the literature shows that there is little evidence that inflation targeting reduces the costs of fighting inflation. Moreover, I present new evidence that, with respect to moderate rates of inflation – under 20% -- there are few macroeconomic costs of inflation. Hence, central banks' focus on inflation targeting cannot be explained by a "rational" social cost/benefit calculation and therefore, political economy analysis must be employed to explain its widespread use. The paper explores a "contested terrain" approach to understanding central banks' preoccupation with inflation fighting, an approach which concentrates on the relative interests of finance, industry and labor with respect to macroeconomic policy. I suggest that, in the case of the United States, financialization during the 1990's led to a closer alignment of large industrial and financial firms in the U.S., leading to a greater emphasis by Alan Greenspan and the U.S. Federal Reserve on financial asset appreciation as a goal of monetary policy. In the conclusion, I explore the contradictions and limits of this as a basis for sustained, expansionary monetary policy for the U.S.

I. Introduction

"Financialization" refers to the increasing importance of financial markets, financial motives, financial institutions, and financial elites in the operations of the economy and its governing institutions, both at the national and international levels

Many questions arise when considering the increased role of finance in the world economy. What are its dimensions? What is causing it? What impact is it having on income distribution within and between countries? What is its impact on economic growth? What impact is financialization having on the nature and distribution of political power within and between countries? What policies can be implemented to reduce the negative affects of financialization while preserving its positive effects, if there are any?

A full analysis of financialization obviously encompasses a large set of issues. This paper considers one aspect: the relationship between central bank policy and financialization. In particular, this paper addresses a specific issue that, I hope, will illuminate some more general ones: namely, the relationship between financialization, central bank "inflation targeting", and rentier interests in the world economy.

"Inflation targeting" has become the operating method of choice for many mainstream monetary economists, international organizations such as the IMF and many central bankers. (Bernanke, Laubach, Mishkin and Posen, 1999). According to one of its more active promoters, Frederic Mishkin, "The emergence of inflation targeting over the last ten years has been an exciting development in the approach of central banks to conduct monetary policy. After initial adoption by New Zealand in 1990, inflation targeting has been the choice of a growing number of central banks in industrial and emerging economies, and many more are considering future adoption of this new monetary framework." (Mishkin and Schmidt-Hebbel, 2001, p.1). By their count, nineteen countries had adopted inflation targeting as of November 2000 and more were on the way.¹

In a nutshell, inflation targeting involves establishing a low inflation goal and directing monetary policy to achieve that goal, almost always to the virtual exclusion of all other goals such as employment generation, high levels of investment, or full employment. (see a more precise description below.)

Inflation targeting is only one of a number of proposals by mainstream economists and policy makers that are designed to create a neo-liberal central banking structure, that is, a central bank that is consistent with an economy with a small government role, privatized industries, liberalized financial markets, and flexible labor markets. These central bank proposals include adopting central bank "independence", and in developing countries, adopting currency boards, and/or substituting a foreign currency -- most commonly the dollar -- as domestic legal tender.

¹ Of these, nine are industrialized countries (Australia, Canada, Finland, Israel, New Zealand, Spain, Sweden, Switzerland and the United Kingdom) and ten are semi-industrialized or transitional economies (Brazil, Chile, Colombia, The Czech Republic, Korea, Mexico, Peru, Poland, South Africa and Thailand). Finland and Spain stopped using inflation targeting when they relinquished monetary policy to adopt the Euro in 1999. It turns out that it is somewhat difficult to tell which countries are actually using inflation targeting and which are not. See below.

Indeed, inflation targeting itself is a somewhat vague concept, as evidenced by the fact that different authors identify different sets of countries as actually implementing such an approach. For example, some countries are defined as "explicit inflation targeters" while other countries, such as Germany and the U.S. Federal Reserve have sometimes been identified as "implicit" inflation targeters. (Bernanke, et. al, 1999, Mankiw, 2001).

While these monetary structures differ in many important ways, for the most part they are intended to have the same effects: keep inflation at a very low level, reduce central bank support for government fiscal deficits and eliminate the influence of democratic social and political forces on central bank policy. In this paper I will focus on inflation targeting and central bank independence, but many of the problems I identify with this approach are also relevant to the other approaches that are designed to create a "neo-liberal" central bank. In fact, there is evidence that, as one paper puts it, "Monetary policy is more clearly focused on inflation under inflation targeting and may have been *toughened* by inflation targeting". Empirical work suggests that central bank aversion to inflation shocks (relative to output shocks) has been increased with the adoption of inflation targeting (Ceccetti and Ehrmann, 2000; Corbo, et. al. 2000).

The widespread support for "inflation targeting" is puzzling from a purely technical economic point of view, primarily because even its most vociferous proponents have been unable to provide much convincing theoretical or empirical evidence in support of the key claims made in its favor, apart from the fact that it does seem to reduce inflation (See Mishkin and Schmidt-Hebbel, 2001 for a recent survey) There are three main additional arguments made in favor of inflation targeting. The first is that, in the long run, the classical dichotomy holds so that full employment prevails, and monetary policy can only affect nominal variables, such as the price level or inflation, and not real variables such as employment or investment. This, of course, is a central divide between mainstream economics and heterodox economics, and, while discussing this issue goes far beyond the scope of this paper, suffice it to say that I believe there is little theoretical or empirical support for the dichotomy view.

The second, and more concrete claim is that inflation targeting will reduce the so-called "sacrifice ratio" associated with contractionary monetary policy. That is, by convincing agents that the central bank's commitment to reducing inflation is "credible", inflation targeting will lower the output loss associated with reducing inflation. Not only is the theoretical basis for such claims faulty, more importantly, as I discuss below in more detail, there is virtually no empirical evidence to support the idea that the "sacrifice ratio" is reduced by inflation targeting.

Third, underlying the whole approach to inflation targeting is the notion that inflation should be kept at a very low level because inflation has significant economic costs. Yet, as I will show below in more detail, and as others have also shown, moderate levels of inflation have no discernable economic costs and might even have some benefits.

The puzzle arises, then: why have so many economists proposed inflation targeting and why have so many central banks either adopted it or, considering adopting it if it lacks serious theoretical or empirical support?

This is where the relationship between inflation targeting, financialization and rentier interests come in. I believe an important reason why inflation targeting has been adopted and is

being so widely promoted is because of the increased role of financialization in the world economy.

First in importance is the increased power of rentier interests which have been promoting inflation targeting and central bank independence as ways of keeping inflation low and reducing the influence of democratic forces over central bank policy. Second, has been the spread of capital account liberalization and financial liberalization. This aspect of financialization has confronted policy makers, especially in the debtor developing countries, with the dilemma of how to satisfy their creditors' demands in order to keep the foreign credit coming into their countries, and keep their foreign exchange reserves from fleeing through capital flight. In their search for a way to successfully integrate themselves into the world capital markets, they have been increasingly convinced that inflation targeting, central bank independence, or some other form of neo-liberal central bank structure will be necessary. (See Maxfield, 1998.)

In this sense, the neo-liberal central bank has been promoted as part of what Epstein and Gintis have called the "International Credit Regime", the set of domestic and international institutions that convince creditors to lend money abroad by making it more likely that debtors will successfully service and repay their loans (Epstein and Gintis, 1992).² The neo-liberal central bank, in short, is touted to developing countries as necessary to attract and retain more international capital.

On the face of it, this sounds like a plausible argument. After all, there is good evidence that the adoption of the Gold Standard by countries in the 1920's served as a "good housekeeping seal of approval" and enhanced the ability of countries to attract foreign capital (Bordo, Edelstein and Rockoff, 1999). But the evidence on this effect in the current period is unclear. It might be that adopting independent central banks or inflation targeting is helpful in attracting capital. But if it is, it is hard to find the effects in the data.

In the end, it appears, that a main effect of adopting inflation targeting, thus far, has been to reduce inflation and increase the share of income going to rentiers in many parts of the world. Thus, at the core, to understand inflation targeting, and the promotion of the neo-liberal central banking structure, it is necessary to look at the political economy of central banking.

In this regard, I argue that financialization has dramatically altered the landscape of the political economy of central banking itself, especially in the United States. Here I draw on the framework developed with my colleague Juliet Schor (Epstein and Schor, 1990a; Epstein, 1990, b; Epstein, 1994) in which we argue that four factors determine central bank policy: 1) the structure of capital-labor and product-market relations 2) the political structure of the central bank, that is, whether it was independent of the government or integrated into it 3) the connections between finance and industry and 4) the position of the nation in the world economy.

² Epstein and Gintis identify two parts of the "international credit regime". The first is the "enforcement structure", which is the set of international creditor institutions, such as the IMF, that penalize recalcitrant debtors. The second is the "repayment structure", the institutions in the debtor countries that convince creditors that they will repay. The neo-liberal central bank, according to this view, is part of the "repayment structure". Together, these two sets of institutions allow the international capital market to function.

Applying these factors to the U.S. I argue, along with others (eg. Dumenil and Levey, 2000, Krippner, 2001) that financialization has altered the structure and motives of many "industrial firms" and magnified their rentier motivations, including their increasing dependence on share price appreciations. This, along with the reduced power of labor and the increased hegemony of the United States and the U.S. dollar, has increased the desire of the Federal Reserve to lower interest rates well below what it has desired for many decades. This policy, a sort of "rentier-led growth" has been a major support for global economic growth in the last decade.

Is this U.S. rentier-led growth sustainable? It seems very unlikely. Among other reasons, the strategy is dependent on the United States running increasing, and increasingly unsustainable trade deficits.

A more sustainable approach would be to have widely dispersed national sources of economic expansion. One way to achieve this would be to have central banks in many parts of the world target employment growth, rather than inflation. Below, I suggest some basic principles for "employment targeting" by central banks.

The rest of the paper is organized as follows. The next section, will present and evaluate the case for inflation targeting. Section III will present new evidence on the impact of inflation on developing and developed economies. Section IV will look at the political economy of central banking as a way of understanding the adoption of inflation targeting. Section V will describe a more egalitarian alternative to inflation targeting, namely employment targeting. And section VI offers a brief conclusion.

II. The Case for Inflation Targeting

According to its advocates, "full fledged" inflation targeting consists of five components: absence of other nominal anchors, such as exchange rates or nominal GDP; an institutional commitment to price stability; absence of fiscal dominance; policy (instrument) independence; and policy transparency and accountability. (Mishkin and Schmidt-Hebbel, 2001, p. 3; Bernanke, et. al. 1999). The oddest idea in this list is the notion that inflation targeting increases "accountability", a point to which I return below.

In practice, few central banks reach the "ideal" of being "full fledged" inflation targeters. But, while the implementation of inflation targeting varies from country to country, in practice the hallmark of inflation targeting is the announcement by the government, the central bank, or some combination of the two that in the future the central bank will strive to hold inflation at or near some numerically specified level. (Bernanke and Mishkin, 1997, p. 98). Most central banks specify a range rather than single numbers and these ranges are typically established for multiple horizons ranging from one to four years. The overriding announced goal of inflation targeting central banks is typically "price stability", usually defined to be an inflation rate of about 2%. (Ibid., p. 99).

The degree to which the central bank is formally accountable to meeting its targets varies. In New Zealand, for example, law links the tenure of the central bank governor to the inflation targets whereas in other countries, there are no legal or explicit sanctions. Rather, the prestige of the central bank and its governors, and their future job prospects in the private sector are presumably at stake (Ibid., p. 100).

Despite the language emphasizing inflation control as the overriding goal of monetary policy, inflation targeting banks have to some degree accommodated concerns for short-term stabilization objectives, especially with respect to output, exchange rates and, more recently, financial stability. (Ibid., p. 101) This accommodation is accomplished in a number of ways: by using a price index that excludes some particularly volatile elements, such as food and energy; by specifying the target as a range; by occasionally adjusting targets to reflect unusual events such as large supply shocks.

Nonetheless, it is important not to lose sight of the fact that even though inflation targeting central banks do sometimes take into account short term stabilization objectives, inflation is still far and away the overriding concern. In most inflation targeting regimes, “the central bank publishes regular, detailed assessments of the inflation situation, including current forecasts of inflation and discussion of the policy response that is needed to keep inflation on track.”(Ibid., p.102) By contrast, if unemployment, investment promotion or employment growth were the “overriding objective” of central bank policy, one would presumably observe the central bank publishing regular detailed assessments of the unemployment situation, including current forecasts of unemployment and a discussion of the policy response that is needed to keep unemployment on track. Stabilizing prices, though a secondary objective, would get much less attention. It is clear that the in such a world, the policy atmosphere would be entirely different.

Inflation targeting is usually associated with changes in the law, which enhance the independence of the central bank (Ibid., p. 102; Mishkin and Schmidt-Hebbel, 2001, p. 8). Some economists draw a distinction between goal independence and instrument independence with the former giving the central bank the ability to set its own policy targets, and with the latter only giving the central bank the ability to choose the means by which to achieve the goals established by the government (DeBelle, 1994). This distinction may not always be significant in practice. Even where changes in law formally only enhance the “instrument” independence of the central bank, in practice, in most cases the goal independence of central banks is apparently increased as well. (Bernanke and Mishkin, 1997, p. 102).

Advocates of inflation targeting claim that targeting is associated with more central bank independence, and at the same time, more accountability. This apparent contradiction is at the heart of the political economy of inflation targeting. The key question, of course, is this: to whom does inflation targeting make the central bank accountable? If the central bank becomes independent, then it would seem that it would be accountable to nobody but itself. How can advocates then claim that along with independence comes accountability?

The solution to this paradox is, of course, that inflation targeting and central bank independence makes the central bank less accountable to the government, and more accountable

to the financial markets and those who operate in them. (Epstein,1982; Epstein and Schor, 1990b; Blinder, 1998).

Advocates try to get around this paradox by drawing the distinction between instrument independence, in which the central bank controls monetary policy instruments and goal independence, in which the central bank sets the goals of monetary policy.(Debelle and Fischer (1994); Fischer (1994). Most economists have come to the idea that, perhaps, society, (i.e., the government) "ought" to set the goals of monetary policy and the central bank should have "instrument" independence. However, in the end this notion is meaningless since the whole point of inflation targeting is to determine the goal: low inflation.

But even here things aren't so simple, and the arguments get increasingly convoluted. Mishkin and others makes a distinction between the "long-run" inflation target, which should be set by "society" and the medium-term inflation target, which is really the operational target (since " in the long run....."). Here, Mishkin argues that the central bank should set the medium run inflation target. So, even here, many advocates only pay lip service to goal setting by the "government".

It seems clear that the sophisticated advocates of inflation targeting want, in a sense, to have their "cake and eat it too". They want to be able to claim the advantages of rules – such as enhanced credibility, reduced discretion and increased insulation from the political process– without bearing the well known costs of inflexible rules or appearing to be "undemocratic".

Indeed, we will see that, even by the evidence developed by inflation targeting advocates themselves, inflation targeting has not been able to deliver on the presumed benefits of a targeting approach: namely, enhanced credibility and a reduced costs of lowering inflation. (Bernanke et al., 1999).

Evidence on Inflation Targeting

To summarize, the major claims made in favor of inflation targeting are:

1. It will reduce the rate of inflation.
2. It will enhance the credibility of policy.
3. By enhancing the credibility of policy, it will reduce the "sacrifice ratio" associated with contractionary monetary policy. That is, it will lower inflation with fewer costs in lost output or increased unemployment.

What then is the evidence on the impact of inflation targeting? I have already indicated that there is some evidence that inflation targeting does succeed in reducing the rate of inflation. In this section I will focus on the other two claims: enhanced credibility and reduced sacrifice ratios.

A line of empirical research on credibility effects has focused on the behavior of inflationary expectations and employment costs of anti-inflationary policy under an inflation-targeting monetary regime. Laubach and Posen (1997) examines survey evidence and long-term nominal interest rates and find no evidence that the introduction of inflation targets affects expectations of inflation. He argues that in most cases inflationary expectations have come down only as a result of a consistent and successful past record of maintaining low inflation. Announcement of inflation targets had no significant effect on expectations of inflation nor did the adoption of an inflation-targeting monetary regime. (Mishkin, 1999).

As for the third claim, there is virtually no evidence of a reduction in the output loss associated with anti-inflationary policy in countries with inflation targeting. On the basis of the empirical work on the consequences of inflation targeting in Australia, New Zealand and Canada by Blinder (1998) and Debelle (1996) states, "nor does the recent experience of OECD countries suggest that central banks that posted inflation targets were able to disinflate at lower cost than central banks without such targets." (Blinder, 1998:63) Similar results are obtained in Posen (1995) who found little evidence that inflation targeting has significantly reduced the employment costs of reducing inflation.

Similarly, Campillo and Miron (1997) find that "institutional arrangements do not by themselves seem to be of much help in achieving low inflation. Economic fundamentals, such as openness, political instability and tax policy seem to play a much larger role." (Campillo and Miron, 1997, p. 356). One exception to this evidence is the work of Corbo, et. al. (2000) who conclude that the sacrifice ratios have declined in emerging markets after adopting inflation targeting. They also find that output volatility has fallen in both emerging and industrialized economies after adopting inflation targeting to levels that are similar to (and sometimes lower than) those observed in industrial countries that not target inflation.

But another recent study by Cecchetti and Ehrmann (2000) came to an opposite conclusion:

"Our results suggest that both countries that introduced inflation targeting, and non-targeting European Union countries approaching monetary union, increased their revealed aversion to inflation variability, and likely suffered most increases in output volatility as a result."

In the end, Bernanke and colleagues' summary is most telling:

. Inflation targeting is no panacea ... it does not enable countries to wring inflation out of their economies without incurring costs in lost output and employment; nor is credibility for the central bank achieved immediately on adoption of an inflation target. Indeed, evidence suggests that the only way for central banks to earn credibility is the hard way: by demonstrating that they have the means and the will to reduce inflation and to keep it low for a period of time. (Bernanke, et. al, 1999, p. 308.) Moreover,

overall...we must admit that the economic performance of the non-targeters over the period considered is not appreciably different from that of the inflation targeters...While in all the inflation-targeting countries, inflation remains unexpectedly low as GDP growth returns to its predicted path, the same is true for (non-targeters) Australia and the United States. (Ibid. p. 283) In short, inflation targets are not a necessary condition for sustaining low inflation...(and)...even for countries with a long record of credible targeting, reducing inflation comes at the price of significant output reductions in the short run. (Ibid. p. 282)

Still, Bernanke, et al. are supportive of the idea that inflation targeting can provide a very useful framework for policy. On the basis of all this evidence, however, it is difficult to see where this support derives from.

The Impact of Central Bank Independence on “Costs of Disinflation” and “Credibility”

As we saw above, central bank independence is part of the neo-liberal prescription for central banks and often accompanies inflation targeting. According to the logic of the neo-liberal approach, central bank independence should enhance credibility and thereby reduce both the costs of disinflation and the level of inflation itself. However, the empirical literature on the credibility-enhancing effects of central bank independence offers mixed support. There appears to be no support for the hypothesis that independent central banks are able to achieve better inflation performance at little or no cost in terms of lost employment and output due to the improved credibility of their policies (Fischer, 1994; Posen, 1995; Fuhrer, 1997). Blinder (1998) for example, notes that “the available evidence does not suggest that more independent central banks are rewarded with more favorable short-run tradeoffs.”(Blinder, 1998: 63; also see Eijffinger and De Haan (1996) for a survey).

Indeed, a number of authors have found that central bank independence may actually *increase* the sacrifice ratio. Walsh (1995) finds that central bank independence may raise the cost of anti-inflationary policy by producing an environment with lower inflation variability and consequently longer-term nominal wage contracts with less indexation. The resulting rigidity of nominal wages will flatten the slope of the Phillips curve and worsen the sacrifice ratio between inflation and output. Walsh argues that empirical evidence from EU countries supports his hypothesis. He concludes that a significant positive correlation exists between the level of central bank independence and the costs of disinflation. Stanley Fischer (1994) and Posen (1995) similarly produce results which positively link central bank independence and disinflation costs. Posen accounts for differences in contracting behavior but still finds no evidence for lower disinflation costs in countries with independent central banks. Eijffinger and De Haan thus conclude, “all this evidence implies that output losses suffered during recessions have, on

average, been larger as the independence of the central bank increases.”(Eijffinger and De Haan, 1996: 38)

In a recent study of 19 industrialized countries, Andersen and Wascher (1999) note that “as the average inflation rate has fallen from 8% to 3.5%, the average sacrifice ratio increased from around 1.5 to about 2.5. They report some evidence that in countries with independent central banks, the ratio has *risen* less than in other countries, they say that high standard errors imply that “identification of the sources of higher sacrifice ratios remains elusive”.

Central Banks and Inflation

Advocates of the neo-liberal approach to central banking have argued that not only will independent central banks enhance credibility, but they will also lower inflation. Eijffinger and De Haan (1996) offer a comprehensive survey of empirical research on the effects of central bank independence. Empirical studies on the relationship between the degree of central bank independence and the level of inflation indeed show a negative correlation between them, but only for the industrialized countries. The measures of central bank independence used in most studies are based on the degree of legal independence as developed by (Alesina 1988; Eijffinger, 1993; Cukierman, 1992). However, Eijffinger and De Haan (1996) themselves note that the negative correlation between inflation and central bank independence does not imply causation. A third factor, such as society’s cultural and historical aversion to inflation or the level of political instability, may be responsible for both the degree of independence and the level of inflation. Also, mutual causality may be playing a role in the inverse relation between the two variables. High (or low) inflation may contribute to more (or less) independence. Furthermore, most empirical tests surveyed by Eijffinger and De Haan (1996) deal with data from industrial countries. Those studies that include developing countries’ data in their test samples (Cukierman 1992) finds no significant relation between inflation and the measures of legal independence of the central banks.

However, as we discussed above, there is evidence that inflation targeting plus central bank independence does, indeed, tend to reduce the inflation rate, even in developing countries, which, presumably, is one of the main goals of both central bank independence and inflation targeting. Hence, inflation targeting seems to lead to more central bank independence and, together, they seem to lead to lower inflation, but at no lower cost in terms of forgone output, and possibly at higher costs. Why are central bankers and governments willing to pay these costs?

III. The Costs of Inflation³

Considering the almost exclusive focus of recent monetary theory and practice on fighting inflation, it is remarkable that very little is known about the short-term and long term costs of

³ For an earlier discussion of these issues, see Epstein (1993).

inflation. And indeed, what is known suggests that the costs of moderate inflation – inflation under 10 or 20% -- are, at most, low.

As a theoretical matter, it is not hard to see why the costs of steady inflation – at any rate – would be moderate. Inflation causes people to economize on cash balances. But, in most general equilibrium models of the economy, cash balances play no obvious crucial role. So-called shoe leather costs – having to go to the bank often – can take a toll, but not a very big one. With computer management of accounts and ATM machines, these costs must be small to the point of vanishing. Walsh (1998) cites estimates which suggest that increases in inflation in the U.S. from 3% to 10% would cost about 1.3% of GDP whereas the lost output associated with reducing inflation from 10% to 3% was calculated at about 16% of GDP. Hence, the cost of reducing inflation was many orders of magnitude greater than the costs of inflation itself.⁴

Economists have also looked at correlations between inflation and measures of real economic activity to attempt to judge the size of the impact of inflation. Barro (1995), for example, finds that inflation under 10% has no negative impact on economic growth. We will present some more evidence below which supports and expands this view.⁵

New Evidence on the Impact of Inflation

This section will discuss the impact of inflation on real economic variables in two data sets: one is a set of countries which, according to their levels of GNP per capita, are semi-industrialized countries; the other is a larger data set, including countries at all income levels. The goal is to assess the impacts of different levels of inflation on significant economic outcomes.

This analysis has two parts. In the first I summarize the results from our previous study that looked at a sample of semi-industrialized economies and show the relationship between inflation and a variety of measures for these countries.(Epstein and Maximov, 1999) In the second section, I generalize this approach and present some econometric results based on a sample of 70 industrialized, semi-industrialized and poorer countries.⁶ The results of the two sections are broadly consistent with each other: moderate rates of inflation seem to have no negative impacts on broad indicators of economic growth, and may, indeed, be associated with positive impacts.

Semi-Industrialized Countries⁷

To conduct this study, we obtained data for 37 countries classified as “upper middle income” by the World Bank according to its estimates of 1997 GNP per capita. The selected data

⁴ Feldstein (1997) argues that the costs would be much higher if the net present value of the costs of inflation were calculated. But of course, if tight monetary policy has long-term negative effects on output, the net present value of those costs would also have to be taken into account.

⁵ See also Bruno and Easterly (1996).

⁶ For an earlier version, see Epstein (2000).

⁷ This section draws on Epstein and Maximov (1999).

covers the time period from 1980 to 1997 (the latest year for which data is available in the World Bank's *World Development Indicators 1999*).⁸ In that study we found that:

1. Moderate rates of inflation, under 20% or so, appear to have no clear impact on most real economic variables such as economic growth, investment, inflows of foreign direct investment and similar variables.
2. High rates of inflation, well over 20%, do appear to have negative real impacts.
3. The impact of inflation on export competitiveness depends on the nature of the exchange rate regime.
4. Disinflation has a mixed effect on real economic variables. In some cases, reducing inflation can have significant negative impacts.

The Impact of Inflation on economic growth in “upper middle income countries”

For the 1980's there clearly seems to be a negative relation between high rates of inflation and per capita GNP growth. But for inflation rates below 20% or so, there is no clear relation between inflation and growth. In the 1990's, the negative relationship between inflation and economic growth is unclear even for very high inflation rates.

The Impact of Inflation on Domestic and Foreign Investment:

There is a similar pattern in the relationship between inflation and investment growth.

There is a negative relationship between very high rates of inflation and growth rates of investment, and no discernable relationship between moderate rates of inflation and investment, in the 1980's. In the 1990's, even the negative relationship associated with high rates of inflation seems to disappear. Moreover, disinflations between the 1980's and 1990's is associated with negative impacts on gross domestic investment.

The evidence on private investment is the one exception to this over all pattern. Large increases in inflation rates are associated with lower increases in investment, and declines in the rate of inflation appear to be associated with increases in private investment rates. The difference between these two sets of relationships is primarily explained by the differences in the behavior of private and public investment.

The relationship between inflation and foreign direct investment is similar to the pattern associated with gross domestic investment. Very high rates of inflation appear to be negatively associated with foreign direct investment net inflows (FDI), whereas moderate rates appear to have no relationship, both in the 1980's and in the 1990's. Moreover, disinflations appear to have no obvious advantages in terms of attracting foreign direct investment.

⁸ See the data appendix A for more information on data definitions and sources.

Inflation and Exports

The relationship between inflation and export growth in 1980's is similar: high rates of inflation are associated with lower rates of growth of exports; moderate rates seem to have no clear relationship. In the 1990's there is a positive relationship between inflation and export growth. An important intervening variable may be the exchange rate arrangements. Apparently, countries with high inflation can experience rapid growth in exports if they let their exchange rates float. Moreover, declines in inflation between the 1980's and 1990's were just about as likely to be associated with declines in export growth as increases in it.

Econometric Analysis of larger data set

Here I present results of some simple econometric estimates of the impact of inflation. I look at a larger sample of countries which includes the middle income countries discussed above, as well as high and low income countries. The sample includes 70 countries and uses annual data from 1960 to 1997.

Table 1 reports ordinary least squares regressions of the impact of various independent variables, including inflation, on the rate of per capita economic growth. The central result for purposes of this paper is that inflation, far from having a negative impact on economic growth, seems to have a positive impact. These results should be taken with a grain of salt because of possible problems of endogeneity (see our discussion below). But there is certainly no support for a negative impact of inflation on economic growth in these data.

There are several other results which may be worth mentioning. Foreign direct investment, as a share of GNP has no impact on growth, except for the final period, 1990-1997, where it seems to have a positive impact. Private investment, as a share of total gross domestic investment, seems to have a negative impact on growth. The measure of central bank independence is a measure of legal independence taken from Cuikerman (1992); it is measured on a scale of 0 to 1, with 0 being complete independence and 1 being complete lack of independence from the government. Hence, these regressions suggest that less independent central banks are better for economic growth. The measure for corruption is on a scale of 0 (clean) to 10 (most corrupt). There is some evidence that the more corrupt, the less rapid is economic growth. Table 2 reports two-stage least squares results that are designed to reduce the endogeneity problems. Interestingly, the results suggest that inflation may have negative impacts on growth for the whole period under analysis, but not for the 1990's. The regressions, however, are not very successful. The adjusted R-squares are extremely small. The basic problem is finding good instruments.

I also looked at the impact of inflation on a variety of other economic outcomes. The results were mostly not supportive of the neo-liberal approach. Table 3, however, reports one set of results that were somewhat supportive, but along the lines we saw above. Table 3 shows the impact of inflation on the rate of growth of gross domestic investment, which includes both private and government investment. The first column shows that higher inflation is associated with a decline in gross domestic investment growth, as the neo-liberal argument implies. But the

next two columns show that for inflation below 20% per year and even 50% per year, this negative effect vanishes.

Interestingly, democracy seems to be positively associated with investment, perhaps because the measure includes government investment.

Inflation, Central Bank Independence, and the Ability to Attract Foreign Investment

If moderate inflation seems to have no negative impacts on economic growth, export growth or private investment, perhaps, it still has a negative impact on the ability of countries to attract foreign investment. And just as the Gold Standard operated as a "good housekeeping seal of approval" in the inter-war period of the 20's (Bordo, Edelstein and Rockoff, 1999), perhaps central bank independence serves the same function now.

Table 4 presents some evidence that bears on these issues. The basic message of table 4 is that neither inflation nor lack of central bank independence seems to discourage (net) foreign direct investment. If anything, higher inflation is associated with more foreign direct investment.

Of course, considerably more work must be done to further explore this issue. But this evidence does not support the idea that inflation targeting or central bank independence are important to attracting foreign capital.

Why do people dislike inflation?

Considering the lack of strong evidence that moderate inflation harms economic welfare, the apparent dislike by the "public" of inflation might seem hard to understand. A recent study by Shiller (1997) suggests an answer. Shiller sent out a questionnaire to a sample of individuals in the U.S., Germany and Brazil. The key finding is that people dislike inflation primarily to the extent that it is perceived as reducing their real incomes.⁹ In short, people in this sample seemed to have very little negative reaction to inflation as defined by economists: the proportional increase in prices and wages. The problem for people seems not to be inflation, per se, but rather that they associate inflation with declines in their real incomes. Under these circumstances, it is not surprising that people dislike "inflation". What we do not know from this study is how completely informed people would feel about moderate inflation, properly defined: moderate and proportional increases in all prices and wages. Until we do, we won't know whether there is an inconsistency between the benign macroeconomic effects described above and micro attitudes toward inflation.

⁹ This differs from the interpretation Shiller gives to his results. He suggests that this results show that people broadly dislike inflation, as defined by economists. But his results clearly contradict that claim. It is surprising that he fails to note that inconsistency.

Why is there such a strong consensus among economists about the negative impact of moderate inflation?

In view of these results, it is surprising that policy makers and economists have revolutionized the making of monetary policy -- taking it back to an era before the Second World War -- by giving it an almost single minded focus on fighting inflation. If the social costs of moderate inflation seem much lower than the costs of achieving it and if the public's dislike of inflation is based on a misunderstanding of the what the word means, then what can explain this global consensus?

Keynes had an explanation for this paradox. He argued that the obsession with price stability was fed by the interests of the financial sector (Keynes, 1964). He of course, is not alone in this view. Epstein, and co-authors, in a series of papers, and many others have argued that financial interests in the U.S. and other OECD countries have been increasingly strong advocates of both central bank independence and low inflation (Epstein, 1992, 1994). Posen presents some evidence in support of this view (Posen, 1995).

Epstein argued that the notion of central bank independence is a misnomer: usually, central bank independence from government implies central bank dependence on the financial sector. (Epstein, 1981, 1982) This view has gotten support from odd quarters. In an old, little known paper, Milton Friedman agreed (Friedman 1962). Even Alan Blinder, former Vice Chairman of the Federal Reserve Board, concurs to some extent. In his recently published Lionel Robbins' lectures, Blinder says, "So far I have spoken about (central bank) independence from the rest of government...this sort of independence is what people seem to have in mind when they talk about independent central banks...But there is another type of independence that, while just as important in my view, is rarely discussed: independence from the financial markets...my point is... that delivering the policies that markets expect -- or indeed demand -- may lead to very poor policy. This danger is greater now than ever, I believe, because the currently-prevailing view of financial markets among central bankers is one of deep respect. The broad, deep, fluid markets are seen as repositories of enormous power and wisdom. In my personal view, the power is beyond dispute, but the wisdom is somewhat suspect." (Blinder, 1998, pp. 60-62)

The elevation of inflation control over all other potential goals of monetary policy, in my view, is a reflection of this power of the financial markets. The evidence also suggests, however, that the wisdom of this approach is "somewhat suspect". It is important to note that this elevation of inflation fighting and central bank independence is not simply an issue of increasing the share of national income going to rentiers; it is also fundamentally an issue of reducing the political power of labor and other groups in the making of macroeconomic policy (Epstein, 1981; Greider, 1987). The next section develops this argument in a little more detail.

IV. The Political Economy of Anti-Inflation Policy and the Neo-liberal approach to Central Banking

In previous work, I and my colleague Juliet Schor have argued that it's best to analyze central banks as "contested terrains" of class and intra-class conflict over the distribution of income and power in the macroeconomy (Epstein and Schor, 1990a, 1990b, and Epstein, 1992). We analyzed simplified economies where we divided the society into three groups: labor, industry and finance, similar to the approach often taken by Keynes. We argued that the determinants of central bank policy depended on 1) the structure of capital-labor and product-market relations 2) the political structure of the central bank, that is, whether it was independent of the government or integrated into it 3) the connections between finance and industry and 4) the position of the nation in the world economy.

We argued that in most cases, the major function of central bank independence was to keep monetary policy out of the hands of labor. (Greider, 1987; Dickens, 1995, 1999; Isenberg, 1998) Where industry and finance were highly divided, as they often were in the UK and the US, central bank independence often served to keep monetary policy out of the hands of industrial capital as well (Epstein and Ferguson, 1984). In this case, central bank independence tended to give disproportionate power to finance or, as Keynes called them, the "rentier interests".

More recently, I argued that, with financial liberalization and globalization, many countries in the industrialized world were evolving into situations where rentiers had more and more power and, as a result, independent central bank policy would increasingly be guided by rentier interests at the expense of both labor and industry (Epstein, 1994).

There seems now to be a further evolution in these class interests. Increasingly, in the United States and, probably also Europe, rentier and industrial interests may be merging, but not as in the case of the old German and Japanese financial structures (Zysman, 1984; Pollin, 1995; Grabel, 1997) where industrial interests dominated finance. Rather, it may increasingly be the case that with the de-regulation of financial markets, mergers and acquisitions and the emergence of increasingly liquid and speculative asset markets – that is, with *financialization* -- that industrial enterprises themselves are beginning to be increasingly guided by rentier motives. In short, "financialization" may have changed the structure of class relations between industry and finance, making their interests much more similar.¹⁰

In this case, independent central banks are rentier banks, but now both industry and finance are increasingly rentier as well. If this analysis is correct, what is the implication for central bank policy?

In our earlier analysis of central bank policy, we argued that rentier central banks were primarily interested in maintaining low inflation and high real interest rates because rentiers are

¹⁰Kotz and Hilferding argued that finance controlled capital in earlier periods. This is a different argument from the one I am making here. External financial interests do not control industry over the protests of the captain's of industry; rather, I am arguing that industrial capitalists may have joined the "enemy".

creditors. I think in the current situation this view is still true, but it is not now the whole story (if it ever was). The reason is the increasing importance of capital gains in the wealth accumulation of finance and “industry”. Hence, while price inflation is still out, “asset inflation” is definitely in – very in. This is why, in recent years, capitalists on both Wall Street and main street and, everywhere around the world, are very wary of increases in interest rates. They fear that interest rate increases would burst the asset inflation bubble, and, in fact, their fear does not seem to have been misplaced.

Financialization and asset price inflation may be a temporary state of affairs. But it might also represent a new era in the political economy of finance. Of course, I do not know which is the case. But, I believe that this tendency toward closer relations between finance and industry as rentiers is more than a passing phase. If this is true, what is the implication for the policy of independent central banks?

A model of the Rentier Central Bank in the age of Financialization and Asset Inflation

In what follows I briefly sketch out an (overly) simple “model” which attempts to answer this question. Assume that the central bank is “independent” which means, effectively, it is independent from influence by labor.

This independence means that the central bank's goal is to maximize the profit of capitalists, both industrial and financial, though with a heavier weight on financial capital. As industry's interests become more similar to those of finance as a result of the financialization of industrial corporations, the independent central bank becomes concerned with rentier interests because both industry and finance become more like rentiers and the divisions between industry and finance are reduced. These points are illustrated by the "model" described below.

In this model, the interest rate (i) is assumed to be under the control of the central bank (call it "the Fed"). There are two sectors, industry (I) and finance (F), and two variables that affect the profit rate of financial capitalists (π^F) and the profit rate of industrial capitalists (π^I). The first is the inflation rate (inf). Because of the Phillips curve, the inflation rate contains information about the state of unemployment and capacity utilization as well as inflation. And the second is the rate of asset appreciation (A).

That is, in what follows:

π^F = profit rate of financial capitalists

π^I = profit rate of industrial capitalists

A = rate of asset price appreciation

inf = rate of inflation

i = interest rate controlled by the central bank

First, consider the financial profit rate. It is assumed to be a positive function of asset appreciation and to be negatively affected by inflation. Asset appreciation, in turn, is assumed to go up when interest rates go down. On the other hand, financial profits fall when inflation goes up; and

inflation goes down when interest rates rise. This information is summarized in equations (1) and (2) below.

$$(1) \pi^F = \pi^F(A(i), \text{inf}(i))$$

$$(2) d\pi^F = \frac{\partial \pi^F}{\partial A} \frac{\partial A}{\partial i} di + \frac{\partial \pi^F}{\partial \text{inf}} \frac{\partial \text{inf}}{\partial i} di$$

$$\frac{\partial \pi^F}{\partial A} > 0, \frac{\partial A}{\partial i} < 0, \frac{\partial \pi^F}{\partial \text{inf}} < 0, \frac{\partial \text{inf}}{\partial i} < 0$$

The industrial profit rate is also affected by asset appreciation and inflation, which, in turn, are affected by interest rates. Asset appreciation is also assumed to improve industrialists profit rates, and more so to the extent that financialization occurs and therefore as asset appreciation becomes increasingly important to industrial capitalists. The relationship between inflation and industrial capitalists varies, depending on the state of the labor markets and product markets. At low levels of output and inflation, an increase in output (and therefore inflation) can lead to higher profit rates. But as inflationary pressures build due to tighter labor markets, then industrial profit rates will begin to fall. To the extent that financialization induces industrial capitalists to become more sensitive to financial asset returns (as opposed to capital gains) then for this reason also, increases in inflation would tend to erode profits. These considerations are summarized in equations (3) and (4) below.

$$(3) \pi^I = \pi^I(A(i), \text{inf}(i))$$

$$(4) d\pi^I = \frac{\partial \pi^I}{\partial A} \frac{\partial A}{\partial i} di + \frac{\partial \pi^I}{\partial \text{inf}} \frac{\partial \text{inf}}{\partial i} di$$

$$\frac{\partial \pi^I}{\partial A} > 0, \frac{\partial A}{\partial i} < 0, \frac{\partial \pi^I}{\partial \text{inf}} > 0 \text{ or } < 0, \frac{\partial \text{inf}}{\partial i} < 0$$

Figure 1 (see the end of the paper) shows the relationship between interest rates and the two profit rates prior to financialization, when industry and finance interests are fairly distinct.¹¹ The diagram reflects the idea that as the Fed lowers interest rates from a high level, profit rates for both finance and industry will rise, because of asset appreciation in the case of finance and because of increased demand for products, in the case of firms. However, as the interest rate falls more, inflation begins to increase and erodes the gains for finance. As interest rates fall and labor markets get tighter, the profits of industrial firms get squeezed as well (Boddy and Crotty, 1972). Eventually, industrial profit rates begin to fall. The two i^* 's represent the profit maximizing interest rates for finance and industry. By the logic described above, the optimal interest rate for industry will tend to be lower than that for finance. (See Figure 1)

With financialization, things change. Asset appreciation becomes more important to both industry and finance. And as a result, they both prefer a lower interest rate than before. At the same time, industry becomes more wary of inflation, because its income is increasingly dependent on rentier income. As a result, industry's optimal interest rate could rise. As a result of these two factors, the optimal interest rates of industry and finance tend to move closer to each other and there tends to be less conflict between them over monetary policy.

To get more contextual about this, I briefly turn to the U.S. experience in the 1990's. In the U.S., of course, the asset bubble became increasingly important. At the same time, the power of labor became weaker and weaker. For that reason, the profit squeeze problems facing industry became less important. In addition, during the 1990's, the United States was able to import huge quantities of cheap imports because the asset boom and the increasingly secure reserve currency role of the dollar allowed the US economy to finance huge trade deficits even while the dollar appreciated. This reduced the cost of imports. For these reasons, the impact of lower interest rates on inflation ($\frac{\partial \text{inf}}{\partial i}$) in equations (2) and (4)), got smaller and smaller. As a result, as illustrated in Figure 2, the optimal interest rates for both finance and industry got both closer and lower. That is both finance and industry supported lower interest rates by the Fed to keep the asset bubble going, especially as long as weak labor and the hegemonic role of the dollar helped to keep inflation in check (also, see Pollin, 2000).

Rentier-Led Growth?

This raises the question: is U.S. dominated rentier-led growth sustainable? If so, are common concerns about stagnation induced neo-liberal macroeconomic policy misplaced?

One might think that this question has already been answered, considering the stock market bubble burst and the world economy has slid into recession. But many economists are predicting a short "V" shaped recession and restored world economic growth in the near future. In other words, they appear to believe that the 90's model of "rentier-led" growth is still viable. This

¹¹ The curves will have these shapes under specific assumptions about the relative sizes of the derivatives.

question is, of course, well beyond the scope of this paper. But, a brief consideration is relevant to a consideration of alternative central bank policy.

There are many contradictions associated with U.S. dominated, rentier-led growth. One important one, relevant to this discussion, is the lack of domestic expansion in many parts of the world. This lack of decentralized expansion has generated a dangerous global dependence on US import growth to sustain world demand. This dependence is a result of many factors, including neo-liberal "export-led growth" policy promoted by the IMF and others. Of relevance here is another factor: in many parts of the world, domestic monetary policy is excessively restrictive, partly out of a direct concern with "inflation" and partly because of the perceived difficulties of engaging in monetary expansion in the face of liberalized domestic and international financial markets.

So, to help reduce the world's dependence on U.S. rentier-led growth, other countries (or regions) in the south as well as the north, have to generate more of their own domestic sources of demand. In many countries, an important contribution to this goal can and should be made by central bank policy. But to make this contribution, most central bankers will have to abandon their obsession with inflation fighting, and gimmicks such as "inflation targeting" and adopt an alternative approach to central bank policy. This alternative approach must emphasize real variables, at least in countries that do not have serious inflation problems. In the low and moderate inflation countries, especially those with high levels of unemployment or underemployment, employment expansion, investment growth or other real variables appropriate to each country's situation should be the focus. The next section offers some general principals applicable to such an approach.

V. An Alternative Approach to Central Bank Policy

The empirical evidence of the previous sections suggest that there is very little reason to make inflation targeting the basis for monetary policy. The elevation of inflation targets over all other goals of policy -- the hallmark of inflation targeting -- seems to reflect more the power and influence of rentier interests than a sober approach based on the needs of the economy. If inflation targeting does not appear to be a promising approach to monetary policy, what should the approach be? In my view, a better one would embody the following principles:

1. Context Appropriate Monetary Policy

Central bank policy goals and operating procedures must be based on the structure and needs of the particular economy at hand: no generic, one-size fits all approach, is likely to be appropriate to every situation.

2. Real Economy Oriented Monetary Policy

A single-minded focus on inflation, especially in countries with high levels of unemployment and underemployment is a wrong-headed and costly approach. Policy should recognize that very high rates of inflation can have significant costs, but that short of that, policy must also be oriented toward promoting investment, raising employment growth and reducing unemployment. Hence, the targets of monetary policy should include not just inflation but important real variables such as employment growth and investment.

3. Transparency and Accountability

Taking a leaf from the targeting approach, central banks should be made more accountable to the public by making their objectives and approaches more transparent. They should tell the public what their targets for monetary policy are. They should describe the economic assumptions underlying their plans to reach those targets. And if they do not reach them, they should explain why and describe their plans for achieving them in the next period. And most importantly, the goals of the central bank should be determined by a democratic process.

4. Policy Flexibility

A fundamental fact is that there is a great deal of uncertainty concerning the underlying structure of the economy and about the nature of national and international shocks at any particular time. Hence, adherence to any target -- inflation, employment growth or investment -- has to be a flexible adherence. Rigid application of any target can easily lead to serious policy errors. For example, a supply shock might be mistaken for a demand shock, or a deviation from a target might be a result of a fundamental structural change rather than a change within a particular structure.

5. Supporting Institutions

Central bank policy is no panacea. Other important supporting institutions are also required. For example, policies to reduce the massive surges of financial capital into and out of economies are often required to create the space to allow for productive central bank policy. Strong tax institutions to enable the government to raise the revenue it needs to fund important public investments are crucial. Public financial institutions to channel credit in support of productive investment are needed. While a discussion of these supporting institutional changes is well outside the scope of this paper, it is important to understand that no central bank policy framework can succeed on its own. (See Pollin, 1998, for an enlightening discussion of these issues.)

Employment Growth as a Goal for Monetary Policy

An example of a useful target for monetary policy is employment growth. This particular target will be especially attractive in countries with high levels of unemployment or underemployment, a situation prevalent in many parts of the south. Under this approach, an employment growth target would be chosen, subject to an inflation constraint, where the inflation constraint is no lower than necessary.

The Targeting Approach

There are two components to the targeting approach. The first is the concept of targeting, itself. The second is the choice of targets. While inflation is certainly the wrong target in many cases, there are aspects of the targeting approach itself that can usefully be part of a progressive central bank approach. Targeting can improve transparency and accountability to the public by making clear what the goals of policy are. If the goals are missed, targeting requires the central bank to explain clearly the reasons for missing the target and delineate what measures will be taken to correct the mistakes.

How would the Employment Targeting Framework Operate?

The central bank, in conjunction with the government, would estimate a feasible target range for employment growth, taking into account the rates that are consistent with moderate inflation. Based on the estimate of the relationship between the central banks' policy instrument and employment growth, the central bank will try to achieve its target. Note that many of the problems that arise will be similar to those that arise with inflation targeting. For example, what is the best instrument to use? What is the best way to measure employment growth? What should be done about uncertainty. There is no reason to believe that these issues will be any easier – or harder to deal with—than in the inflation targeting case.

Objections to Employment Targeting

The major objection to employment targeting from mainstream economists is also the least valid: it is the claim that only nominal variables can be affected by monetary policy, at least in the long run. But Keynes' point about the long run is still true; and there is plenty of evidence that central bank policy can have significant impacts on employment and investment (eg. Ball, 1999).

There will be other objections to employment targeting. Many economists will argue that the association between central bank policy and employment growth is simply too loose to base policy on. But Bernanke et al, and other advocates of targeting have admitted that the connection between central bank policy and inflation is also loose and variable. (Bernanke, et. al. 1999) There is simply no macroeconomic variable worthy of interest, including inflation, that is perfectly

controlled by the central bank.

Some economists might argue that our approach is bound to fail, and, indeed, is no different from outdated approaches to central bank policy. Many will claim that it is "old-fashioned" or "out-dated". However, our approach builds on recent discussions of the impact of inflation and inflation targeting. In particular,

1. it recognizes that high rates of inflation (over 15 -20%) can have significant, negative impacts on important real variables and therefore high rates of inflation should be avoided.
2. along with the new literature, it supports the idea that transparency, clear objectives, and clear modus operandi is important for good policy.

Moreover, there is nothing wrong with being "old fashioned" if the old fashion makes more sense than the new one. What this approach rejects is the notion that low inflation should be the single-minded goal of policy. And it rejects the pseudo-scientific claim that a gimmick such as inflation targeting can deliver a credibility free lunch to society. The main free lunch available to most economies only results from putting to work unemployed and under-employed resources. The inflation target advocates, by making false promises, and in some cases even bullying countries to adopt such targets, serve to undermine the one free lunch that most economies are likely to have.

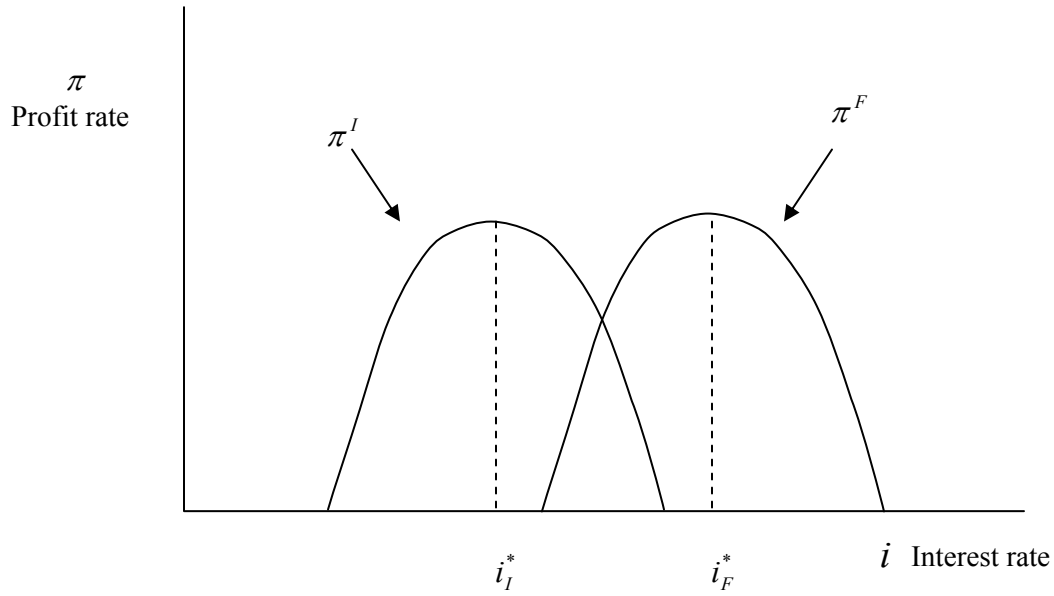
VI. Conclusion

Certainly, there is a huge amount of work to be done to understand how to implement an employment targeting approach to monetary policy. But the key point is this: if even a small fraction of the effort and resources that have gone into studying inflation targeting would go into trying to understand employment targeting, there is little doubt that employment targeting, or some variant of it, could become a strong candidate as central bank operating procedure. As a result, it is time to begin devoting our efforts to develop an alternative to the dead-end approach offered by inflation targeting and other neo-liberal approaches to central banking.

Some might object that the logic of this paper shows the futility of trying to develop an alternative central bank approach because the power of financialization and the rentier class has simply grown to be too strong. In fact, however, I would argue the opposite. As I have suggested, the contradictions of U.S. based rentier-led growth are severe. Countries, who heretofore have been counting on U.S. imports and capital flows to fuel their economic growth and raise their living standards, are, in the near to medium term, likely to be disappointed. Hence they will be looking for alternative economic structures and policies as the rentier-led economic approach fails them.

In such an environment, it would do well for progressives to be prepared with carefully thought out alternative economic programs to put on the table for debate and consideration. If we are ready with the alternatives, I suspect, there will be an audience out there ready to listen.

Figure1. Profit Maximizing Central Bank Rates
 Finance/Industry Split
 Weak Labor



i_I^* = optimal interest rate, Industry i_F^* = optimal interest rate, Finance

Figure2. Profit Maximizing Central Bank Rates
 Financialization
 Weaker Labor

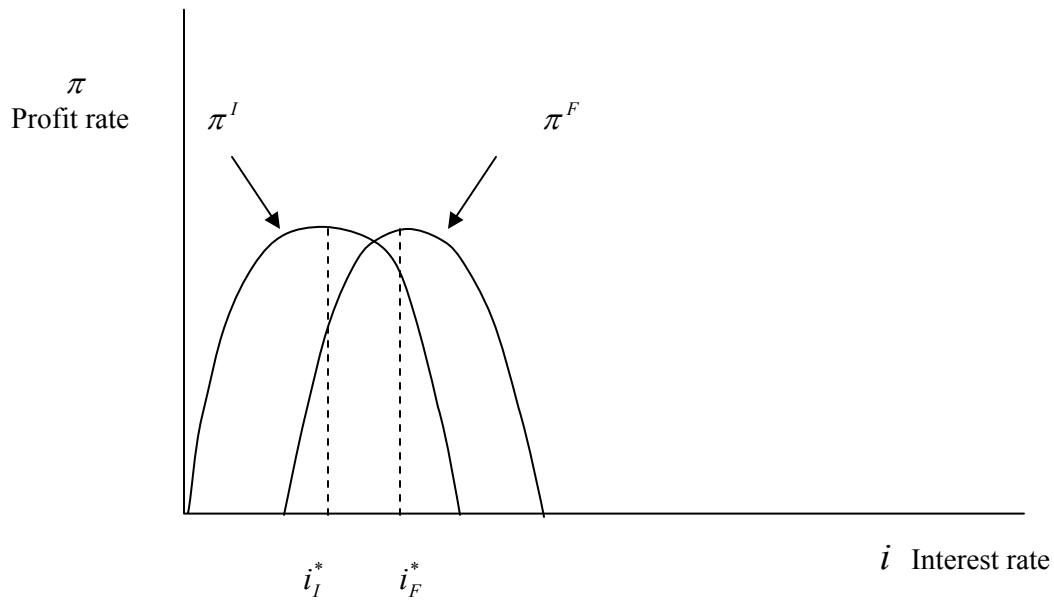


Table 1
Economic Growth and Inflation
Dependent Variable: Rate of Growth of Real Per Capita GNP
(Ordinary Least Squares)

Independent Variable	1960-1997	1970-1997	1980-1997	1990-1997
Inflation	.037 (3.09)	.05 (4.45)	.056 (4.6)	.01 (1.95)
Growth of Gross Domestic Investment	.16 (12.6)	.17 (14.3)	.17 (13.2)	.151 (10.61)
Export Growth	.046 (2.36)	.05 (2.2)	.065 (2.57)	.089 (3.4)
Foreign Direct Investment	-.15 (-.84)	-.02 (-.9)	-.21 (-1.3)	.26 (2.7)
Private Investment Share	-.03 (2.45)	-.03 (2.2)	-.04 (-2.52)	-.03 (3.57)
Central Bank Independence	5.7 (1.8)	4.09 (1.55)	5.18 (1.9)	
Corruption		-.17 (1.6)	-.11 (-.9)	-.17 (-1.8)
Democracy		-.15 (2.43)	-.18 (-2.7)	-.11 (-1.8)
Country Fixed Effects	Yes	Yes	No	No
Year Fixed Effects	Yes	Yes	Yes	No
Adjusted R-Square	.43	.60	.60	.48
D-W	1.65	1.75	1.73	1.1
N	249	194	184	206

T-statistics in parentheses. For data definitions and sources, see Appendix B.

Table 2
 Economic Growth and Inflation
 Dependent Variable: Rate of Growth of Real Per Capita GNP
 (2-Stage Least Squares)

Independent Variables	1960-1997	1990-1997
Inflation	-.05 (-3.2)	-.09 (-.45)
Growth of Gross Domestic Investment	-.007 (-.006)	.022 (.07)
FDI	.40 (.50)	.25 (.53)
Export Growth	.41 (.55)	.56 (1.47)
Adjusted R- square	-.43	-.30
D-W	1.7	2.12
N	473	206

T-statistics in parentheses.

Instruments: Private Investment Share, Corruption, Democracy, Country
 For data definitions and sources, see Appendix B.

Table 3

Inflation and Investment
 Dependent Variable: Growth of Gross Domestic Investment
 All Countries, low inflation cases and moderate inflation cases
 (Ordinary least squares)

Independent Variable	Inflation: Any Rate	Inflation < 20% per year	Inflation < 50% per year
Inflation	-.04 (-2.13)	.12 (.37)	.035 (.46)
GNP Growth	2.6 (18.9)	3.11 (8.0)	3.0 (10.6)
FDI	.11 (.44)	1.5 (.81)	3.3 (2.6)
Private Investment Share	.06 (1.8)	.48 (2.8)	.24 (2.9)
Democracy	.56 (3.5)	1.0 (1.9)	.62 (1.85)
Corruption	-.26 (-9)	-2.7 (-1.3)	-.21 (-.25)
Country Fixed Effects	Yes	Yes	Yes
Year Fixed Effects	Yes	Yes	Yes
Adjusted R- Square	.46	.50	.48
D-W	1.9	2.1	2.1
N	460	64	134

T-statistics in parentheses. For data definitions and sources, see appendix B.

Table 4
 Foreign Direct Investment (FDI)
 (FDI as share of GDP)
 1960-1997

Independent Variable	Any inflation rate		Inflation <20%	Inflation > 50%
inflation	.009 (4.5)	.009 (2.3)	.027 (1.7)	.01 (3.5)
gdp growth	.124 (4.7)	-.004 (-.17)	.036 (1.3)	.227 (5.3)
gdi growth	-.005 (-.74)	.003 (.60)	-.004 (-.64)	-.01 (-1.1)
export growth	.024 (2.5)	.001 (-.06)	0.0	.03 (2.5)
corruption	.096 (3.54)	-.001 (-.06)	-.05 (-1.07)	.19 (5.07)
central bank independence		.504 (.59)		
Adjusted R-sq	.13	.02	.03	.14
N	690	266	101	492

T-statistics in parentheses. See appendix B for data definitions and sources.

Data Appendix A: Analysis of Upper Middle Income Countries

Data were obtained for 37 countries classified as “upper middle income” by the World Bank according to its estimates of 1997 GNP per capita. The selected data covers the time period from 1980 to 1997 (the latest year for which data is available in the World Bank’s *World Development Indicators 1999*).

Growth of GNP per capita. *World Development Indicators (WDI) 1999* CD-ROM. Annual growth rates of GNP per capita (%) are averaged by decade for each country in the group.

Investment data are obtained from the WDI CD-ROM. Two types of investment data are used: The average annual **growth rates of gross domestic investment** and **gross private investment**.

Unemployment: WDI CD-ROM. Annual levels of unemployment are measured as percent of total labor force.

The **export growth** data are from the WDI CD-ROM series “Exports of Goods and Services (annual % growth).”

Net inflows of **foreign direct investment** (as % of GDP) are taken from the WDI CD-ROM.

Appendix B: Seventy Country Data Set

The data were collected and organized for 70 countries used by A.Cukierman in his study CentralBank Strategy, Credibility, and Independence (MIT Press, 1992)

- 1) **CBI1** -- index of central bank independence. Taken from Cukierman (1992). The index ranges from 0 to 1, with 0 indicating complete independence and 1 – complete lack of it.
- 2) **CBI2** – another index of central bank independence, though not used in this study.
- 2) **Country** – a variable for country, which ranges from 1 to 70.

Argentina
Australia
Austria
Belgium
Bahamas, The
Bolivia
Brazil
Barbados
Botswana
Canada
Switzerland
Chile
China
Colombia
Costa Rica
Germany
Denmark
Egypt, Arab Rep.
Spain
Ethiopia
Finland
France
United Kingdom
Ghana
Greece
Honduras
Hungary
Indonesia
India

Ireland
Iceland
Israel
Italy
Japan
Kenya
Korea, Rep.
Lebanon
Luxembourg
Morocco
Mexico
Malta
Malaysia
Nigeria
Nicaragua
Netherlands
Norway
Nepal
New Zealand
Pakistan
Panama
Peru
Philippines
Poland
Qatar
Romania
Singapore
Sweden
Thailand
Turkey
Tanzania
Uganda
Uruguay
United States
Venezuela
Samoa
Yugoslavia, FR (Serbia/Montenegro)
South Africa
Congo, Dem. Rep.

Zambia
Zimbabwe

- 4) **Corruption** – corruption perceptions index. Ranges from 0 to 10, 0 being clean and 10 corrupt. Source: Transparency International, www.transparency.de
- 5) **Democracy** – democracy index. Ranges from 0 to 10, 0 – completely undemocratic, and 10 – democratic. Source: Polity III, from the Inter-university Consortium for Political and Social Research, http://icpsr.umich.edu/ICPSR_homepage.html
- 6) **Exportg** – export growth in annual percent. The data was taken from World Bank’s World Development Indicators 1999 CD-ROM, series “Exports of Goods and Services (annual % growth).”
- 7) **FDI** – foreign direct investment, net inflows as % of GDP. Source – World Development Indicators 1999, CD-ROM.
- 8) **GDI** – gross domestic investment, in constant 1995\$. Source – WDI 1999.
- 9) **GDIG** – annual growth rate of gross domestic investment, in percent. Derived from the GDI series. WDI, 1999.
- 10) **GNPG** – annual growth rate of GNP per capita, %. Source – WDI, 1999.
- 11) **Inflation** – annual percentage level of consumer price inflation. Source – WDI, 1999.
- 12) **LI** – index of legal central bank independence. Ranges from 0 to 1, 0 – most independence, 1 – least independence. Source – Cukierman, 1992.
- 13) **PI** – gross domestic private investment as percent of gross domestic fixed investment. Source: WDI, 1999.

14) **QVAU** – index of central bank independence based on questionnaire. Source – Cukierman, 1992.

15) **QVAW** – index of central bank independence based on a questionnaire (weighted). Source – Cukierman, 1992.

16) **TOR** – index of central bank independence based on the turn-over rate of central bank governors. Source – Cukierman, 1992.

17) **Unempl** – average annual level of unemployment as percent of total labor force. Source – WDI 1999.

18) **Year** – a proxy variable for year. Ranges from 1960 to 1997.

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