Recovery or Recession?
Post-Devaluation Output Performance:
The Thai Experience

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ABSTRACT

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Most analyses of the East Asian financial crisis have focused on its causes and the links between currency and banking crises. However a related question is what happens in the aftermath of a crisis? What factors determine the path of an economy in the post-devaluation phase? Does it swiftly bounce back, with the crisis being followed by a period of economic recovery, or does it face a lengthy period of economic recession? An important element in answering these questions is to consider the response to devaluation, since this constitutes an almost invariant component of economic stabilisation. This paper examines these questions using Thailand as a case study.

Key words: capital flows, currency crisis, contraction devaluation, Thailand

JEL Classification: F30, F32, F41

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1. Introduction

Most analyses of the East Asian financial crisis have focused on its causes and the links between currency and banking crises. However a related question is what happens in the aftermath of a crisis? What factors determine the path of an economy in the post-devaluation phase? Does it swiftly bounce back, with the crisis being followed by a period of economic recovery, or does it face a lengthy period of economic recession? An important element in answering these questions is to consider the response to devaluation, since this constitutes an almost invariant component of economic stabilisation.

Early research into the effects of devaluation in developing countries concentrated on whether it would be effective in strengthening the current account of the balance of payments. This largely resorted to considering whether developing countries complied with the relevant Marshall-Lerner conditions, and whether devaluation would spark off further inflation that would undermine its effect on competitiveness. The general conclusion was that, provided domestic monetary policy was not excessively expansionary, the net effect of devaluation would be to strengthen competitiveness. Foreign trade price elasticities were generally found to be sufficient to ensure that this resulted in an improvement in the current account.

But what about the effect of devaluation on other macro economic variables, particularly output? The conventional textbook view was that devaluation would have expansionary effects because it increased the demand for tradeables (Dornbusch, 1988). In developing countries additional demand could be associated with the price related switch of demand away from imports and the additional incentives to supply exports provided by the increase in their domestic currency supply price. In circumstances where an economy enjoyed quasi-full employment, it was recommended that expenditure switching devaluation should be accompanied by expenditure reducing policies (i.e. contractionary monetary and fiscal policies) to
offset its inflationary repercussions. Thus the IMF’s conventional wisdom was to combine exchange rate devaluation with measures to deflate aggregate domestic demand.

“New Structuralists” challenged both this analysis and the policy prescription that followed on from it (Krugman and Taylor, 1978, and Taylor, 1981). They argued that devaluation would be contractionary and that IMF programmes were stagflationary. Whether devaluation was expansionary or contractionary was therefore apparently an empirical issue. Regression analysis of twelve developing economies for the period 1965-80 by Edwards (1986) suggested that real devaluations have a small contractionary effect in the short run but are neutral in the long run. However in a broad survey of the empirical evidence, Kamin (1988) concluded that there was no empirical evidence to support the claim that devaluation \textit{per se} was contractionary. He found that more often than not, recessions preceded devaluation.

However following the East Asian crisis of 1997-98, many economies in the region expressed a sharp decline in output (Table 1). Does this experience in the aftermath of devaluation provide new evidence suggesting that devaluation can indeed be harshly contractionary in certain sets of circumstances? And if so, what are these circumstances? Is there anything different in the East Asian case that distinguishes it from the earlier cases which seemed to be empirically inconsistent with the idea that devaluation would lead to recession?

This paper examines these questions using Thailand as a case study. We focus on Thailand because it was the “trigger” country in the region-wide crisis in East Asia in 1997-98. Section 2 examines the channels through which devaluation may have an impact on economic activity. Although it briefly reviews the well-rehearsed potential effects of devaluation on aggregate demand and supply, we concentrate on the less familiar effects of devaluation on the capital account. These
effects have been somewhat overlooked in the analysis of devaluation by comparison with its effects on the current account, but they may have been important in the case of the East Asian crisis, given that it has frequently been presented as a crisis of the capital account. Certainly, capital account effects have come to the fore in the context of analysing crises (Yoshitomi and Ohno, 1999). Having established the circumstances that may link a currency crisis and exchange rate devaluation with economic collapse, Section 3 goes on to see whether these circumstances existed in Thailand. Section 4 considers whether Thailand is a special case or whether similar circumstances may be replicated elsewhere. It examines the implications for policy and the design of IMF-supported programmes. If there is a more general presumption that, through its capital account effects, devaluation may exert an acute, albeit temporary, recessionary influence, there may be reason to pause before recommending devaluation to every country in crisis and to think carefully about what policies should accompany such an expenditure switching policy. Section 5 offers a few concluding remarks.

2. From Crisis to Collapse

2.1 Contractionary Effects of Devaluation: The Current Account

There are various well established routes via which devaluation may in principle have a contractionary effect spanning both aggregate demand and aggregate supply (Edwards, 1989, Lizondo and Montiel, 1989, and van Wijnbergen, 1986). On the demand side, and with both a high average propensity to import and a low price elasticity of demand for imports, devaluation will tend to divert domestic monetary demand away from home produced goods. A similar impact may be felt in

For instance Caballero and Krishnamurthy (1998) have observed that: the Asian crisis is just the most recent chapter of an increasing trend toward shifting the ‘blame’ from current to capital account issues. Many think that this trend is an almost unavoidable side effect of increasing globalisation of capital markets (p.2).
the case of highly indebted countries which, with external debt denominated in foreign currency, will experience an increase in the domestic currency costs of servicing debt (Cooper, 1971), implying that other forms of government expenditure will have to be reduced if the fiscal balance is not to weaken.

The income redistributive effects of devaluation will favour profits in the traded goods sector – the mechanism through which devaluation affects the current account – and disfavour real wages, as the price level rises. However spending and savings propensities may differ as between those receiving profits and wages. If the marginal propensity to save is higher from profits than from wages the economy’s average propensity to save will rise and this will tend to be demand contractionary (Diaz-Alejandro, 1963, Knight 1976). The increase in the price level will also increase the nominal demand for money or, what comes to the same thing, reduce the real supply of money. There will therefore be an increase in the rate of interest which will tend to deter consumption and investment. The effect will again be contractionary. Related declines in asset prices may also discourage investment via the effect on Tobin’s q.

On the supply side there are again a number of channels through which devaluation may exert a recessionary impact. The domestic currency costs of imported inputs will rise. Furthermore the increased domestic rate of interest will raise the costs of production for firms that rely heavily on bank credit. These things will tend to shift the economy’s aggregate supply schedule to the left. At the same time as being contractionary, they may therefore be inflationary. Lizondo and Montiel (1989), who flesh out the effects of these various links between the exchange rate and output, find overall that the supply side effects on output will tend to be negative while the demand side effects could in principle be either positive or negative.

2.2 Contractionary Effects of Devaluation: The Capital Account

While the literature on the contractionary effects of devaluation has
concentrated heavily on the effects that devaluation will have via the current account of the balance of payments, it may also have effects on domestic economic activity via its impact on the capital account. Indeed it is unlikely that the “conventional” contractionary effects of devaluation via the current account can explain the magnitude and ferocity of some economic contractions following devaluation.

Krugman (1999) nicely describes the issue in the case of East Asia:

(i) if there is a single statistic that captures the violence of the shock to Asia most dramatically, it is the reversal in the current account: in the case of Thailand, for example, the country was forced by the reversal of capital flows to go from a deficit of some 10 percent of GDP in 1996 to a surplus of 8 percent in 1998. The need to effect such a huge change in the current account represents what may be history’s most spectacular example of the classic “transfer problem” debated by Keynes and Ohlin in the 1920s. In practice this swing has been achieved partly through massive real depreciation, partly though severe recession that produces a compression of imports” (p.9).

But how exactly might devaluation affect capital flows? The a priori reasoning is ambiguous. A quick answer is that where devaluation serves to create or restore confidence it will tend to have a positive effect; while where it fails to create confidence, or even damages it, it will also fail to turn capital outflows around and may even speed them up. Thus where devaluation is part of a credible macroeconomic strategy, is combined with appropriate counter-inflationary fiscal and monetary policy, and leads to a new exchange rate that is perceived by private capital markets to be close to the equilibrium real rate or below it, it will have a positive effect on creditworthiness and capital flows. Where on the other hand, it is perceived as a panic measure, is combined with excessively expansionary fiscal and monetary policy, and leads to a new rate that is still seen as involving currency overvaluation, it will be associated with further capital outflows.

This analysis may be re-interpreted within the context of a simple asset market framework. As noted earlier, devaluation will tend to be initially associated with rising interest rates as the price level rises and the real supply of money falls. On its own this may encourage capital inflows. But there is another element. What
happens to expected exchange rate changes? Where the exchange rate is not expected to fall further, there will be a positive effect on capital flows. However where a contemporary devaluation creates an expectation of a further future fall in the value of the currency, then this will tend to have a negative effect on capital flows.

In other words, where devaluation restores confidence, recession will be avoided and the devaluing country will recover quickly assisted by capital inflows. However where devaluation leads to the further evaporation of confidence, recession becomes more likely, especially as there is a “self-fulfilling prophecy” at work. If devaluation damages confidence it will result in additional capital outflows which will cause the further decline in the currency’s value that was anticipated. This internal dynamic can then lead to short run overshooting beyond the equilibrium real exchange rate. As Calvo (1996) has noted, “if there is a ‘bad’ equilibrium lurking in the background, a devaluation - especially, an unscheduled devaluation - could coordinate expectations and help push the economy to the ‘bad’ equilibrium” (p.219).

This then has implications for the macroeconomic policies that accompany devaluation and shifts in exchange rate regime. If the capital account effect of devaluation leads to a drying up of capital inflows, the domestic monetary authorities are left with an awkward choice. If they allow capital outflows to reduce the domestic money supply there will almost certainly be a recessionary macroeconomic effect. As the East Asian crisis has made clear, there are also important balance sheet effects at work. For instance a conventional discretionary absorption reducing (i.e. high interest rate policy) monetary policy could raise the probability that a country will be unable to service its debt (the so-called “Laffer curve” effects of monetary policy), further swelling the share of non-performing loans (NPLs) held by financial institutions. Decapitalised banks may in turn curtail their lending intensifying the

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2 The Laffer curve effects of monetary policy have been the focus of a great deal of attention since the East Asian crisis. See for instance Furman and Stiglitz (1998), Goldfajn and Baig (1998) and Lahiri and Vegh (2000).
recession (supply side effect). In addition the rise in local currency debt (and thus fall in corporate net worth) along with the collapse in asset prices that tend to accompany - in fact precede - devaluation, could deepen the "credit crunch" caused initially by loss of access to international capital markets.

If, on the other hand, the authorities relax domestic monetary policy in order to offset to some extent the effects of capital outflows on domestic liquidity, they will neutralise the recessionary effects and may avoid a potential collapse in output. However the current account effect will then be moderated and it will take longer to replenish depleted foreign exchange reserves. Moreover, since the rise in the interest rate will then be less pronounced, this could delay the return of foreign capital. In circumstances where governments are anxious to avoid severe recession in the aftermath of devaluation immediately following a crisis, it is easy to see how they may be persuaded to combine currency devaluation with some degree of domestic monetary relaxation. The difficulty for the authorities is in knowing ex ante what the response of private capital markets will be to a depreciation in the currency’s value. Will they see this as an appropriate correction that will bring the current account deficit to a sustainable level, or will they see it as an indication of macroeconomic laxity and a lead indicator of the need for further correction. If so, they will interpret it as a negative signal. The problem then is that monetary relaxation may be interpreted by markets as representing exactly the kind of macroeconomic laxity that they fear.

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3 As Kasa (1998) has noted:

collateralised lending is a powerful propagation mechanism. When borrowing must be backed by the value of collateral, a dynamic feedback process arises between asset prices and aggregate economic activity. In particular, a sudden decline in the value of collateral (e.g., land or equity prices), or a sudden increase in the real value of debt (due, e.g., to a currency devaluation) tends to reduce borrowing capacity, and therefore investment, in those sectors with the strictest collateral requirements, e.g., small businesses with little access to secondary debt markets.... Once a shock occurs, feedback effects between collateral values, investment, and aggregate economic activity tend to propagate its effects over time (pp.2-3).
3. Thailand: A Case Study

This section has a modest objective. We do not attempt to model formally the ideas discussed above. What we do instead is to describe what happened in Thailand and attempt to relate it to the foregoing discussion. Is there at least preliminary evidence to support the notion that the capital account response to devaluation may be a conduit for economic recession? This does not involve us in a comprehensive analysis of the Thai crisis4. Rather we draw attention to key characteristics related to the initial crisis (i.e. devaluation) and the outright financial and economic collapse that ensued (Rajan, forthcoming). While this important distinction between the initial devaluation and ensuing financial and economic collapse appears to be missing from the existing debate on the causes and consequences of the East Asian crisis in general, both Calvo and Mendoza (1996) and Sachs et al. (1996) have concluded that the Mexican crisis of 1994-95 ought to be seen in terms of these two distinct stages5.

3.1 Monetary Disequilibrium Based Devaluation

An important characteristic of the pre-devaluation period in Thailand was that the monetary authorities sterilised reserve outflows so as to ensure smooth growth of money supply during the crisis period (Rajan, forthcoming, Rajan and Sugema, 2000 and World Bank, 1999). But what is the reason for this sterilisation of outflows?

As would be expected in most developing countries, bank lending has been


5 Also see Corbett and Vines (1998). In the case of Mexico though, the emphasis was more on equity flows than bank lending. There also remains some disagreement as to whether the initial devaluation of the peso was self-validating (Sachs et al., 1996) or fundamentals-based a la KFG (Calvo, 1996a and Calvo and Mendoza, 1996). Focusing on Mexico and Thailand, Montiel (1999) also stresses the importance of bad fundamentals leading to devaluation, which if postponed, could precipitate an outright liquidity crisis.
the dominant form of funding in Thailand. A sustained drop in bank lending would have been severely detrimental to real economic activity, and it is of no surprise therefore that the Bank of Thailand (BOT) attempted to support the ailing financial institutions through an infusion of liquidity. This can be partially discerned from Table 2 which reveals a pointed rise in the claims by the BOT over the financial institutions from late 1996 onwards through the Financial Institutions Development Fund (FIDF). There was in fact a four-fold rise (in real terms) in the liquidity provided over the next six months, with BOT credit to financial institutions rising from 2 percent of GDP in 1996 to 15 percent by the end of 1997 (World Bank, 1999). The Property Loan Management Organisation (PLMO) was established to purchase and manage property loans from financial institutions so as to reduce balance sheet pressures on the latter (Renaud, et al., 1998). Consequently despite the drop in reserves, the monetary base experienced a sharp rise during that period as the fall in reserves was more than matched by the rise in domestic credit (Charts 1 and 2).

MacIntyre (1999) succinctly summarises the course of events in Thailand during this period:

(a) side effect of injecting large scale emergency funding into the...failing finance companies was blowing out the money supply...This served to sharpen the fundamental contradiction in the government’s overall macroeconomic position. At the same time as it was pumping money into insolvent finance companies to keep them afloat, the central bank was also spending down reserves to prop up the exchange rate...(T)his was not a sustainable strategy (p.14).

The analytics of the crisis, based on the foregoing discussion, may be simply

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6 World Bank data on small and medium sized enterprises in Thailand suggest that bank loans accounted for some 35 percent of total working capital in Thai firms (Hallward-Driemeier, et al., 1999).

7 The Thai authorities established the FIDF in 1985 after the country experienced a deep financial crisis in 1983-84. The FIDF was given the mandate of providing liquidity support to ailing financial institutions. At that time, a support scheme within the FIDF - the “April 4 Lifeboat Scheme” - was created, which offered soft loans to a number of such institutions. Depositors in and a number of creditors of these institutions were generally bailed out. This historical precedence offers a credible basis for agents to have expected an implicit guarantee/strong government backup of the financial system.
noted below using the following two identities:

\[
\text{CAD} = -\Delta R + \Delta K \quad (1)
\]
\[
\Delta H = \Delta R + \Delta \text{NDA} \quad (2)
\]

where: CAD is the current account deficit; \( \Delta R \) is the change in reserves; \( \Delta K \) represents capital flows; \( \Delta H \) is the change in the monetary base; and \( \Delta \text{NDA} \) is the change in net domestic assets. Eq. (1) is simply the balance of payments accounting identity stating that a current account deficit must be financed through drawing down international reserve holdings or through capital inflows. Eq. (2) states that changes in the monetary base must be an outcome of changes in international reserves and net domestic assets. Substituting eq. (1) into (2) we get:

\[
\text{CAD} + \Delta H = \Delta \text{NDA} + \Delta K \quad (3)
\]

With \( \Delta K (\Delta R) < 0 \) and \( \Delta H = 0 \) (given the costs of an interest rate hike), it follows that \( \Delta \text{NDA} > 0 \). If capital outflows and reserve losses are sustained, the result is inevitably that the currency will be expected to depreciate, leading to an increase in domestic interest rates. As reserves fall to some minimum level, the expected currency devaluation will become a reality. In Thailand, this happened on July 2\textsuperscript{nd} 1997.

**3.2 Dynamics and Consequences of Capital Flows in the Aftermath of the Devaluation**

In the period leading up to the devaluation (i.e. first quarter of 1997) only the non-bank sector experienced capital outflows (Table 3). More precisely it was the non-resident baht accounts (NRBAs) in particular, but also the “other loans” component that recorded net outflows. NRBAs are essentially nostro accounts held in domestic banks that serve various transactions, including baht clearing for foreign
currency-related transactions and stock market transactions by foreigners. Net FDI inflows remained positive throughout 1997 and portfolio flows too only changed direction in November and December 1997. Private bank capital flows turned around sharply by over $10 billion between the first half and second halves of 1997. This reversal intensified in 1998, with outflows reaching almost $14 billion.

Of significance here is the fact that funds were still flowing into the country during the first half of 1997 right up to the devaluation. It was only after the devaluation that there was a massive exodus of these banking sector flows. Capital outflows from NRBAs were $3.5 billion in the first half of 1997, over $2 billion in the second half of the year and slowed to about $2.7 billion for the 1998 as a whole. According to some reports, Thailand was pulled back from the brink of national bankruptcy at the end of 1997 only because creditors agreed to roll over their foreign loans to local firms (Bangkok Post, December 22, 1997).

Mirroring these sharp capital withdrawals after the initial devaluation, the baht kept depreciating until the baht/dollar rate peaked at about 55 in January 1998 (Chart 3); Furthermore, the Thai interbank rate differential over LIBOR continued rising well after the successful speculative attack in July 1997, reflecting a further expected depreciation of the baht. In line with this, the share of non-financial private corporations in Thailand with interest expenses in excess of profits rose sharply from one quarter in the second half of 1997 to three fifths by the second half of 1998 (Table 4). A recent study by the Monetary Authority of Singapore (MAS) (1999) concluded that:

(t)he Baht forward discount rose from (January-) February 1997, when the currency first came under speculative attack, and it continued to rise as the solvency of a large number of finance and property development companies was increasingly doubted. However, the forward discount did not fully anticipate the magnitude of the actual depreciation that took place following the abandonment of the exchange rate peg” (p.5).
The difficulties faced by financial institutions led to large-scale domestic “credit rationing” in Thailand. While recognizing that credit growth reflects both the demand for and supply of credit (for instance, see Kraay, 1998, Lane et al., 1999, Lindgren et al., 1999 and Stiglitz and Furman, 1998), at least in the case of Thailand, available evidence suggests that the credit crunch was more supply induced (Agenor, et al., 2000). Indeed available evidence points to a high and growing risk aversion on the part of Thai financial institutions towards lending as they became burdened by large NPLs and remain undercapitalised (IMF, 2000b)\(^8\).

Given this liquidity crunch, investment and output was severely curtailed in 1997-98. Domestic demand overall experienced an even sharper decline due to a fall in private consumption; the BOT’s composite consumption index fell sharply in mid 1997, with consumer durables being especially hard hit. While investment demand fell across-the-board, construction was worst affected, its share falling from half of total investment before the crisis to just 35 percent by 1999 (Table 5).

While Thailand was indeed on a downward growth trajectory pre-crisis, the devaluation of the baht seemed to precipitate an outright economic collapse emanating from the capital account. Thus GDP, which had declined by between 1 and 2 percent in 1997, fell dramatically by 10 percent in 1998. Supply and demand side channels via the current account then intensified the recessionary effects due to a sudden loss of access to international capital markets. A particularly important dimension in Thailand and the rest of crisis-hit East Asia was the balance sheet effects due to large unhedged exposure to short term foreign currency denominated debt. In a recent review of the IMF response to the East Asian crisis, Fund economists noted:

\[(\text{i})\text{t was}\ldots\text{not foreseen at the outset that these economies would adjust in a dysfunctional way to reduced external financing - largely through}\]

\(^8\) This may in turn reflect the fact that the Thai government has favoured a more market-oriented approach to the restructuring of financial institutions, with the primary responsibility for finding new capital and resolving NPLs having been left with the private banks themselves.
a collapse of private domestic demand rather than a boom in exports. This adjustment reflected in large part the harsh balance-sheet effects of the currency depreciations that occurred, given the unhedged foreign currency exposures of banks and corporations (Boorman et al., 2000, p.6).

Thus the rise in the baht value of external debts following the initial devaluation substantially worsened the balance sheet positions of domestic corporates and banks, which in turn worsened domestic economic conditions and intensified capital outflows (Krugman, 1999).

How is all of this connected to the monetary framework discussed in the previous section? Aghion et al. (2000) provide the answer within a similar monetary framework. In their set-up, devaluation leads to an appreciation in the local currency value of corporate debt. This curtails absorption and output, lowering money demand, consequently causing the currency to depreciate. In a bank-based economy with large-scale unhedged foreign debt, forward-looking agents will expect this outcome, leading to a vicious spiral of devaluation, insolvency and bearish expectations.

3.3 Role of Monetary and Fiscal Policy

A remaining question is whether the economic contraction in Thailand in the post-devaluation period was more to do with contractionary monetary and fiscal policy than the contractionary effects of devaluation? In the case of monetary policy, the Thai authorities in fact hesitated to raise interest rates in the first few months of the crisis in mid 1997. This policy vacillation may have undermined the credibility of the Fund-supported programme. Available evidence, based on estimated impulse response functions of real GDP growth to a given deceleration of the growth of real money, suggests that subsequent monetary tightening accounted for less than a quarter of the negative swing in GDP growth rates between 1997 and
1998 (Boorman et al, 2000 and Lane et al., 1999). Interest rates were below their pre-crisis levels by mid 1998, as exchange rates and capital outflows stabilised.

What about fiscal policy? In fact the fiscal policy stance has been highly supportive of economic recovery, though this has resulted in a sustained fiscal deficit since 1996 with consequent implications for and concerns about public debt sustainability (IMF, 2000b). Fiscal policy does not seem to be an important explanatory factor for the ensuing recession.

While detailed discussions of the recent macroeconomic trends (1999 and 2000) in Thailand are beyond the scope of this paper, we do note that consumption demand rebounded sharply while export demand was buoyed by the depreciated currency, strong growth in the US and Europe, and economic recovery in the regional trading partners. However investment demand has remained depressed until late 1999 owing to the existence of excess capacity (particularly in the construction sector) and corporate debt overhang. Overall GDP growth bounced back to average 4 to 5 percent between 1999 and 2000.

The Thai experience in the aftermath of devaluation as analysed above, is largely consistent with the econometric evidence presented by Morley (1992) relating to the effects of real devaluation during stabilisation in twenty eight developing economies since 1974. His study reaches four conclusions. First, real devaluations do reduce output in the short run, and they take at least two years to have their full effect. Second, devaluations are less likely to be recessionary if they are

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9 Boorman et al. (2000) ask the question, “did the tighter initial stance on fiscal policy have a negative effect on economic activity that persisted even though the initial tightening was unwound.” While they acknowledge that this is “a difficult to answer with available data”, they go on to note that “(i)n the case of Thailand…the program was introduced in August 1997 and, at the first quarterly review in November, as early projections suggested underperformance with regard to the initial fiscal targets, additional measures were introduced with a view to achieving the original targets. The latter further tightening of policies – intended at the time to avoid shaking confidence by weakening fiscal targets at the time of accession of a new government- was, in hindsight, mistaken; it delayed the easing of fiscal policy until about six months into the program” (p.51).
accompanied by an increase in foreign lending. Third, expenditure reducing policies
have a modest impact on output during the period under consideration. As he notes,
“the typical stabilisation programme consisted of a real devaluation and a sharp fiscal
and monetary contraction…(T)hese demand-side policies did not play any
independent role on capacity utilisation beyond their possible contribution in
changing nominal devaluations into real devaluations..” (p.27) Fourth, the contraction
was closely associated with a decline in investment. While Morley did not test for
long run effects, as noted earlier, a number of other studies have found that the real
exchange rate is neutral in the long run, i.e. it is neither contractionary nor
expansionary. Any contractionary effects of devaluation appear to be reversed in the
long run. This is also consistent with the rebound in growth in Thailand and the rest
of East Asia.

4. Policy Implications: To Devalue or Not to Devalue?

The above discussion should not be interpreted as providing support for an
overvalued currency. There is compelling evidence that currency overvaluation
creates economic problems, and in the long run is unsustainable. Postponing
exchange rate correction will make matters worse. However while devaluation is
generally effective at strengthening the current account of the balance of payments
(Bird, 1983 and Kamin, 1988), governments will have other policy objectives. In the
midst of a crisis they will want to correct the current account, but they will also want
to do the minimum damage to economic growth and employment. So it becomes
important to consider the effects of devaluation on output, and to design
macroeconomic policy in a way that avoids unnecessary recession.

Experience in...
Thailand suggest that it is through its effects on the capital account that devaluation may result in a sharp decline in output. Devaluation can transmit a negative signal to capital markets and capital outflows will then drive down the value of the currency even further.

For many developing countries the policy response to economic crisis will be designed under the auspices of the IMF. The Fund’s conventional wisdom has been to combine devaluation with contractionary monetary and fiscal policy. While there are clearly good reasons for avoiding macroeconomic laxity, given the analysis in this paper, there is also a real danger of overkill in as much as devaluation will itself engender a contractionary effect via the capital account. In any case, there is evidence to suggest that while they do exert an impact on the real exchange rate, IMF programmes have generally been rather ineffective at constraining monetary growth (Edwards, 1989, Conway, 1994, Killick, 1995).

However the blend of policy may need to vary over time. Evidence from Thailand confirms earlier suggestions in the literature (Cooper, 1973), as well as more recent claims (Gordon, 1999), that the recessionary effects of devaluation may be largely short term. In the longer term, as the overshooting phase of the exchange rate depreciation passes, as the current account begins to respond, and as capital begins to return, monetary policy may therefore need to be tightened. Does adjustment policy perhaps need to stress devaluation early on, and monetary restraint only after the initial adjustment phase? Of course life will never be that easy for the policy maker since it is difficult, if not impossible to know *ex ante* the extent to which a sharp devaluation will spark off capital outflows. Policy makers will always face trade offs. By seeking to avoid recession, they may run the risk that devaluation will be less effective in strengthening the current account.

Uncertainty itself carries implications for policy design. First, it needs to be
flexible enough to respond to circumstances as they evolve. Second, maximum effort needs to be put into avoiding the appearance that devaluation is a panic measure. In this context, an exchange rate stitch in time may save nine! Furthermore, governments in liaison with the IMF need to address the risk that devaluation may spook private capital markets. Devaluation must be presented as part of a credible economic strategy, and foreign capital needs to be bailed in to support it. But, as importantly, developing countries and the IMF should discourage surges of “footloose capital” inflows or “hot money” that enhance vulnerability to future financial crises.

It follows on from this that low income countries that have failed to attract short-term private capital will be less exposed to the recessionary consequences of a devaluation running through the capital account. This will in turn have consequences for the design of the macroeconomic policy that accompanies devaluation in their case. Moreover, for industrialised countries it may be less that devaluation causes panic and more that panic causes devaluation. Thus the UK’s withdrawal from Europe’s Exchange Rate Mechanism in 1992 was followed by a period of falling interest rates, low inflation and substantial economic recovery. The devaluation drew speculative capital movements to a close (Gordon, 1999). In the US case, the longer term structure of the capital flows that finance its current account deficit, and the fact that US debt is primarily in US dollars (not foreign currency), suggests that a devaluation of the US dollar would have fewer contractionary effects than those witnessed in Thailand and elsewhere in East Asia, since the US would be less vulnerable to the capital account effects associated with a sudden loss in confidence.

5. **Concluding Remarks**

It is tempting to argue that the best way of dealing with an economic crisis is to avoid them in the first place. Once a crisis occurs there are no easy answers. It becomes a matter of “ifs” and “buts”. In the midst of a crisis, and with an overvalued
currency, it is unlikely that devaluation can be avoided. Indeed devaluation has shown itself to be an effective policy tool for reducing current account deficits. But strengthening the current account is not the only policy target. Governments will want to avoid severe economic recession.

The traditional view was that devaluation is expansionary/inflationary and needs to be accompanied by demand deflationary monetary and fiscal policy. New structuralist claims that it could be contractionary seemed to lack empirical support. However recent events in East Asia, particularly Thailand, have shown that devaluations may be associated with at least near term recession, and that this can be severe.

Analysis of the Thai example suggests that devaluation may have contributed to capital outflows and that it was the associated loss of liquidity that both directly and indirectly caused recession. We can of course never know the counter-factual. What would have happened had the devaluations not occurred when they did? Moreover, it is difficult to predict the response of capital markets to devaluation. Will it be seen as resolving economic problems, in which case it will generate confidence? Or will it be seen as a panic measure, in which case residual confidence may rapidly evaporate? It is notoriously difficult to explain short term capital flows, let alone anticipate how markets will respond to devaluations.

At the same time, experience in Thailand and elsewhere has awakened us to the idea that there may be a recessionary threat associated with devaluation which works via the capital account response. Moreover, analysis of the Thailand episode helps us to identify countries where the threat is most potent. Being aware of the fact that certain countries may be vulnerable to contractionary consequences from devaluation should help in designing policies which minimise the likelihood of severe recession. There will remain a policy tightrope, but it may help to realize that it is equally easy to fall off in either direction.
Since not all countries will be vulnerable to the recessionary effects of devaluation, an important conclusion is that the macroeconomic policies that accompany it will need to vary from case to case. Better-off developing countries may need a different set of policies than those that would be appropriate in low income countries. An implication is that, to the extent it has, the IMF would be misguided in believing “one size fits all”. The design of monetary and fiscal policy to support devaluation needs to be “made-to-measure” rather than “off-the-peg”. Part of the differentiation may need to be in the timing of policies. Where the recessionary effects of devaluation are short term, tighter domestic policy may need to be phased in over time. Yet there remain Lucas-type dangers with this strategy since capital markets may respond negatively if they perceive monetary policy as being insufficiently tight. Rather than domestic monetary policy neutralizing the recessionary effects of devaluation, it may lead to additional capital outflows that enhance them. It would however be sad if a severe recession became an accepted component of the catharsis that some countries have to endure in order to re-establish their creditworthiness in the eyes of capital markets.
Bibliography


Conway, ??, (1994). ??


Table 1
Cumulative Output Losses of the East Asian Crisis
(in percent of “potential” output)

<table>
<thead>
<tr>
<th>Country</th>
<th>Cumulative Four-year Output Loss&lt;sup&gt;a&lt;/sup&gt;</th>
</tr>
</thead>
<tbody>
<tr>
<td>Indonesia</td>
<td>82</td>
</tr>
<tr>
<td>Korea</td>
<td>27</td>
</tr>
<tr>
<td>Malaysia</td>
<td>39</td>
</tr>
<tr>
<td>Thailand</td>
<td>57</td>
</tr>
</tbody>
</table>

Notes:  
a) “Calculated as the sum of the output gap over a four year period, starting with the crisis year. The output gap is defined as the percentage difference between the actual and the hypothetical (or ‘potential’) level of real GDP for each country. Graphically, the cumulative output loss would thus be represented by the area between the ‘potential’ and actual output paths, starting from the crisis year and expressed as a percentage of “potential” real GDP. It follows that accumulated losses will be positive, and possibly large, even in cases where output is back to ‘potential’ at the end of the four-year period. In the counterfactual scenario, it is assumed that ‘potential’ GDP grows at 4 percent per annum and that actual and ‘potential’ output coincided within the two-year period preceding the crisis. ‘Actual’ GDP during 1999-2002 refers to IMF projections.”
Source: IMF (1999)

Table 2
Claims by Monetary Authorities on Domestic Financial Institutions, Q1:1996 - Q3:1997<sup>a</sup>

<table>
<thead>
<tr>
<th>Country</th>
<th>Q1-96</th>
<th>Q2-96</th>
<th>Q3-96</th>
<th>Q4-96</th>
<th>Q1-97</th>
<th>Q2-97</th>
<th>Q3-97</th>
<th>Q4-97</th>
</tr>
</thead>
<tbody>
<tr>
<td>Indonesia&lt;sup&gt;b&lt;/sup&gt;</td>
<td>15295</td>
<td>15930</td>
<td>16531</td>
<td>15182</td>
<td>16084</td>
<td>19154</td>
<td>21245</td>
<td>67313</td>
</tr>
<tr>
<td>Malaysia&lt;sup&gt;c&lt;/sup&gt;</td>
<td>6585</td>
<td>6867</td>
<td>5679</td>
<td>5249</td>
<td>5325</td>
<td>5284</td>
<td>5411</td>
<td>5032</td>
</tr>
<tr>
<td>Philippines&lt;sup&gt;d&lt;/sup&gt;</td>
<td>13.1</td>
<td>13.2</td>
<td>13.6</td>
<td>14.2</td>
<td>14.3</td>
<td>16.1</td>
<td>20.0</td>
<td>34.5</td>
</tr>
<tr>
<td>Thailand&lt;sup&gt;e&lt;/sup&gt;</td>
<td>38.4</td>
<td>66.0</td>
<td>72.0</td>
<td>90.1</td>
<td>194.0</td>
<td>353.9</td>
<td>597.9</td>
<td>723.4</td>
</tr>
</tbody>
</table>

Notes:  
a) end of period; b) billions of rupiah; c) millions of ringgit; d) billions of peso; e) billions of baht
Source: Computed from IMF data
### Table 3
Thailand: Composition of Net Private Capital Inflows (US$ billions), 1997-1999

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Q1</td>
<td>Q4</td>
<td>Q1</td>
</tr>
<tr>
<td><strong>Banks</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Commercial banks</td>
<td>-6,640</td>
<td>-13,944</td>
<td>1,244</td>
<td>-4,368</td>
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<tr>
<td>of which Recapitalisation</td>
<td>-1,727</td>
<td>-4,310</td>
<td>881</td>
<td>-2,445</td>
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<tr>
<td>BIBFs</td>
<td>-1,913</td>
<td>-9,634</td>
<td>-2,125</td>
<td>-1,924</td>
</tr>
<tr>
<td><strong>Non-banks</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Direct Investment</td>
<td>3,201</td>
<td>4,688</td>
<td>1,066</td>
<td>1,218</td>
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<tr>
<td>Foreign direct investmenta</td>
<td>3,641</td>
<td>4,810</td>
<td>1,067</td>
<td>1,248</td>
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<tr>
<td>Thai direct investment abroad</td>
<td>-440</td>
<td>-123</td>
<td>-1</td>
<td>-30</td>
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<tr>
<td>Other Loans</td>
<td>-3,783</td>
<td>-4,279</td>
<td>-1,981</td>
<td>-734</td>
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<tr>
<td>Portfolio investment</td>
<td>4,494</td>
<td>539</td>
<td>437</td>
<td>-15</td>
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<tr>
<td>Equity securities</td>
<td>3,869</td>
<td>354</td>
<td>434</td>
<td>-75</td>
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<tr>
<td>Debt securities</td>
<td>625</td>
<td>185</td>
<td>3</td>
<td>60</td>
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<tr>
<td>Nonresident baht account</td>
<td>-5,839</td>
<td>-2,714</td>
<td>-2,269</td>
<td>779</td>
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<tr>
<td>Trade Credits</td>
<td>-242</td>
<td>-494</td>
<td>-186</td>
<td>-160</td>
</tr>
<tr>
<td>Others</td>
<td>256</td>
<td>237</td>
<td>156</td>
<td>160</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>-8,552</td>
<td>-15,967</td>
<td>-4,021</td>
<td>-3,120</td>
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</tbody>
</table>

Notes: a) excluding $2.1 billion in bank recapitalisation
Source: Bank of Thailand

### Table 4
Thailand: Components of GDP Growth, 1991-1999 (percent change)

<table>
<thead>
<tr>
<th></th>
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<th></th>
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</tr>
</thead>
<tbody>
<tr>
<td>Real GDP</td>
<td>8.5</td>
<td>5.9</td>
<td>-1.8</td>
<td>-10.0</td>
<td>4.0</td>
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<td>Domestic Demand</td>
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<td>7.2</td>
<td>-9.5</td>
<td>-24.2</td>
<td>7.9</td>
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<tr>
<td>Consumption</td>
<td>7.5</td>
<td>7.5</td>
<td>-1.2</td>
<td>-12.0</td>
<td>5.5</td>
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<tr>
<td>Private</td>
<td>7.6</td>
<td>6.8</td>
<td>-0.8</td>
<td>-14.0</td>
<td>5.0</td>
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<td>Public</td>
<td>6.5</td>
<td>11.9</td>
<td>-3.6</td>
<td>1.2</td>
<td>8.7</td>
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<tr>
<td>Gross Investment</td>
<td>9.5</td>
<td>6.8</td>
<td>-21.7</td>
<td>-46.7</td>
<td>15.0</td>
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<tr>
<td>Gross Fixed Investment</td>
<td>10.0</td>
<td>7.4</td>
<td>-20.3</td>
<td>-38.1</td>
<td>3.0</td>
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<tr>
<td>Private</td>
<td>8.0</td>
<td>3.4</td>
<td>-29.7</td>
<td>-44.3</td>
<td>-1.2</td>
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<td>Public</td>
<td>20.1</td>
<td>21.9</td>
<td>9.2</td>
<td>-25.7</td>
<td>9.3</td>
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<tr>
<td>Exports of goods &amp; services</td>
<td>14.0</td>
<td>-5.5</td>
<td>8.3</td>
<td>7.9</td>
<td>9.6</td>
</tr>
<tr>
<td>Imports of goods &amp; services</td>
<td>12.4</td>
<td>-0.5</td>
<td>-11.7</td>
<td>-24.9</td>
<td>22.3</td>
</tr>
</tbody>
</table>

Notes: e = estimate; p = projection
Source: BOT
Table 5

<table>
<thead>
<tr>
<th>Period</th>
<th>Number of Firms</th>
<th>Total Loans of Firms (billions of baht)</th>
<th>Profits over Interest Expenses(^a) (%)</th>
<th>Share of Firms with Profits &lt; Interest Expenses</th>
<th>Loans of Companies with Profits &lt; Interest Expenses (% of total loans)</th>
<th>Profits over Liabilities (%)</th>
<th>Debt/ Equity Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>1999:Q2</td>
<td>244</td>
<td>1,780</td>
<td>1.9</td>
<td>34</td>
<td>41.1</td>
<td>13.6</td>
<td>2.9</td>
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<tr>
<td>1999:Q1</td>
<td>244</td>
<td>1,809</td>
<td>1.6</td>
<td>38</td>
<td>46.8</td>
<td>12.1</td>
<td>2.9</td>
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<td>1998:Q4</td>
<td>244</td>
<td>1,816</td>
<td>1.3</td>
<td>47</td>
<td>46.6</td>
<td>9.5</td>
<td>2.8</td>
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<td>1998:Q3</td>
<td>244</td>
<td>1,941</td>
<td>1.1</td>
<td>50</td>
<td>50.3</td>
<td>8.6</td>
<td>3.3</td>
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<td>1998:Q2</td>
<td>244</td>
<td>2,036</td>
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<td>54.0</td>
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<td>3.7</td>
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<td>1998:Q1</td>
<td>244</td>
<td>1,983</td>
<td>1.4</td>
<td>36</td>
<td>40.5</td>
<td>9.3</td>
<td>3.7</td>
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<td>1997:Q4</td>
<td>244</td>
<td>2,092</td>
<td>1.0</td>
<td>25</td>
<td>28.2</td>
<td>7.4</td>
<td>4.6</td>
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<td>244</td>
<td>1,711</td>
<td>1.2</td>
<td>39</td>
<td>49.2</td>
<td>9.0</td>
<td>3.1</td>
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<td>1997:Q2</td>
<td>244</td>
<td>1,455</td>
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<td>20</td>
<td>16.2</td>
<td>15.1</td>
<td>2.2</td>
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<td>1997:Q1</td>
<td>244</td>
<td>1,403</td>
<td>2.7</td>
<td>18</td>
<td>19.0</td>
<td>19.5</td>
<td>2.1</td>
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<td>1996</td>
<td>240</td>
<td>1,333</td>
<td>3.5</td>
<td>10</td>
<td>11.3</td>
<td>15.3</td>
<td>2.0</td>
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<tr>
<td>1995</td>
<td>240</td>
<td>1,038</td>
<td>4.4</td>
<td>7</td>
<td>4.9</td>
<td>18.9</td>
<td>1.7</td>
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<td>1994</td>
<td>239</td>
<td>776</td>
<td>6.1</td>
<td>4</td>
<td>2.6</td>
<td>24.3</td>
<td>1.5</td>
</tr>
</tbody>
</table>

Notes: \(a\) profit is defined as earnings before interest, taxes, depreciation and amortisation (EBITDA)
Source: IMF (2000b)
Chart 1

Source: BOT

Chart 2
Thailand: Money Supply, Apr.95-Apr.99

Source: BOT
Chart 3
Baht/US$ Exchange Rate, Jan.95-Apr.99

Source: BOT
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