Commentary: The Role of Exchange Rate in Inflation Targeting

Khor Hoe Ee

First I would like to thank the Bank of Thailand for inviting me to participate in this very interesting symposium. Singapore has been classified as an implicit inflation targeter by Hans Genberg and, indeed, we do target inflation internally in setting our monetary policy.

There have been many debates on this issue over the years and I am glad that Professor Ito has come out on the side of the pragmatics, that is, that it is possible to have both an exchange rate band as well as inflation targeting. In the last table of his presentation, he showed that pursuing two targets with a single instrument is, for most of the time, consistent. However, I am not sure if that sort of characterization of the central bank practice is accurate because I wonder the extent to which the exchange rate enters explicitly as a target when monetary policy is being set.

It is interesting to consider how the exchange rate enters into the thinking process of setting monetary policy even though there is very little link between inflation and exchange rate as shown in his presentation. Most studies have shown that the pass-through from exchange rate into inflation is very weak. Despite this, most countries in the region insist on adopting a managed float regime. Of course, a managed float regime is a very broad category and although his chart shows many countries as floating, in practice most of them are probably on some form of managed float. My sense is that there are very few free floating, inflation targeting countries, besides New Zealand. Over time, as more countries gain experience with managed float, they are likely to intervene less and allow their exchange rates to float more freely.

I would like to address three issues that Professor Ito did not quite address in his paper. First, why do Asian countries, in particular, insist on adopting a managed float regime? Second, how is it that they are able to get away with it? (Professor Ito has identified certain conditions in which targeting the two variables (exchange rate and inflation) is not necessarily inconsistent and incompatible), and finally, how have central banks managed their exchange rates in practice.
On the first point, why do Asian countries insist on adopting managed float? This has to do with the structure of their economies. Unlike countries in other regions, most Asian countries are very export oriented in manufacturing products. The exchange rate is therefore the most important price from the production point of view. The consumer price index may be important from the consumption point of view, but if you ask the producers in the economy, the exchange rate is a more important price. So it is very difficult for the central bank to totally ignore what happens to the exchange rate. The concern here is not so much to keep the exchange rate undervalued but to prevent the exchange rate from becoming overvalued, leading to a loss of competitiveness in the export sector. The objective is to maintain the competitiveness of the export sector. Although exports may be very strong, it does not necessarily mean that the country is aiming to run a trade surplus. In fact, we have seen before the Asian financial crisis that many countries in the region were running very large current account and trade deficits. So it is really the competitiveness of the export sector which is the key consideration in the central bank’s management of the exchange rate rather than inflation.

Second, countries in the region are subject to very large and volatile capital flows and so they are hit by these shocks all the time. As Professor Ito pointed out, if you don’t intervene, you can have a very volatile exchange rate. We have seen what can happen during the Asian financial crisis as capital flows tend to be driven more by sentiments and can be reversed very easily. The central bank has two objectives: one is to minimize volatility and the other is to prevent the exchange rate from overshooting and becoming misaligned. Once it becomes misaligned, it can cause damage to the export sector and the economy.

So those are the main two reasons why the central banks in the region adopt managed float. Why does it work? Professor Ito has identified certain conditions under which exchange rate management and inflation targeting are not necessarily inconsistent. Here the impossible trinity condition kicks in. What is the impossible trinity condition? It is a logical construct and we need to test whether it holds empirically. There is a recent study by Obstfeld, Shambaugh and Taylor, on the open-economy trilemma covering over 130 years, and what it shows is that the open-economy trilemma basically holds over the long term. But what the study also reveals is that the condition is only weakly binding, meaning that over a short term, you do have the flexibility of managing the exchange rate without triggering massive arbitrage. The trilemma condition is therefore an empirical issue and should not be taken as given.
The other reason that managed float seems to work is that many countries in the region still have some form of capital restrictions. We know the trilemma holds if we have an open capital account, with no restrictions on capital flows. But where you have some capital restrictions, it is possible to manage both (exchange rate and interest rate) at the same time. Of course if the two are fundamentally inconsistent, they will not be sustainable over the long run. But over a short run, it is possible for the central bank to manage the exchange rate and at the same time, use the interest rate as the policy instrument. So managing the two variables is not inconsistent when you have some form of capital account restrictions. Finally, one important reason why exchange interventions appear to have worked is that they have been pretty much asymmetric. A lot of the capital flows have been one way inflows. If you have very large outflows, central banks won’t be able to get away with managing the exchange rate. However, to the extent that the interventions have been to curb the upside, central banks can print money - an unlimited amount of money - to fund the interventions. Hence, the limitation is really on the effectiveness of sterilization to prevent the liquidity from the interventions from feeding into the economy.

How have the central banks managed the exchange rates in practice? First, studies have shown that although the exchange rates are managed, they have become a lot more flexible over the last few years. It is true that the volatility of the exchange rates of “the managed floaters” is somewhat smaller than that of “the free floaters,” but in practice, the difference is not large, and overtime, as countries become more comfortable with managing their exchange rates, they will allow the exchange rates to be more flexible.

My second point is related to the criticism that Asian central banks tend to keep their exchange rates undervalued. Again the data shows that in the last few years, Asian central banks have allowed their exchange rates to appreciate. The issue here is the speed of appreciation of the exchange rate and not so much whether it should appreciate. As long as the appreciation is gradual and does not undermine the export performance of the economy, there is no reason why the central bank would want to keep the exchange rate down. My own sense is that most central banks in the region would like to see a stronger exchange rate, not a weaker exchange rate. There have been some costs in having a managed float as it has led to a large accumulation of reserves and the liquidity has to be sterilized. Of course, there are also benefits associated with having a large reserves. It provides insurance against shocks and improve the credit ratings of the countries. Over the longer haul, for countries like China, its reserves are going to be a very significant source of financing for its investments abroad. As
China grows, and its companies begin to invest abroad, we will see the outflows on the capital account.

The most critical issue with regard to sustainability of the managed float regime is the cost of sterilization. At the moment, sterilization has not imposed much of a cost because domestic interest rates are low but once domestic rates go up, obviously the cost can increase quite sharply. The question then would be whether, politically, the central bank can continue with sterilized interventions and the managed float. A related issue is the risk arising from the liquidity that is bottled up in the central bank’s balance sheet. Would the central bank be able to shield the economy from the liquidity indefinitely? So these are some of the issues that I see in terms of the central banks in the region maintaining a managed exchange rate regime and at the same time, trying to have an independent monetary policy.
Commentary: The Role of Exchange Rate in Inflation Targeting

Pichit Patrawimolpon

Professor Ito’s paper is very insightful in terms of describing the interaction between exchange rate and monetary policy in general, not just inflation targeting. But I was looking for some kind of “rule of thumb” that might help us, practitioners in the central banks in emerging markets, in dealing with this exchange rate issue-- how flexible we want to be. His last slide came very close but not quite.

Let me try to summarize some of his salient points. The first one is that the paper recognized the “impossible trinity” – fixed exchange rate, open capital account and independent monetary policy do not go together. The second one is, at least at the theoretical level, managed exchange rate is compatible with inflation targeting. Here I interpret from his page - 11 comments that he suggests using low interest rate to discourage capital flow. So in a way he is assuming that capital flow is responding to interest rate differentials. I am going to take a look at that hypothesis from the experience of Thailand. And, finally, there is a trend toward pragmatism where exchange rate intervention is used increasingly along with inflation targeting as also confirmed by experiences in other regions.

My comments will focus on a few practical angles and then to try to look at the responsiveness of capital flows to interest differentials as well as to propose perhaps another way of looking at the capital inflows. This will probably have a lot of implications over the next 6-9 months for the whole region not just Thailand. To do this, let me first go to one of the senior-level seminars on the Choice of Exchange Rate Regime organized by the IMF in 2001. From the proceedings of that seminar, the conclusion was that there is no “one size fits all,” which corresponds to the way that Professor Ito described different systems in different ways where you cannot really come up with a solution as to what is most appropriate in general terms. Optimal regimes do vary across time, countries and circumstances and are mostly switched after a crisis.

From that seminar, whether a country is going to let its exchange rate swing-- optimal degree of flexibility-- depends on a number of factors that we observe here. The first is the size of the pass-through. If an exchange rate movement causes inflation to move a lot then there is a need to limit that exchange rate movement. If the domestic price is quite flexible (particularly in
downward direction), as we have seen over the past 5 or 6 years, then even the currency board is fine- the exchange rate doesn’t have to move at all for the macro economy to adjust. The second issue relates to the country’s trade policy and its degree of financial integration. If you have a small open economy with a very large tradable sector, an exchange rate movement is not going to just affect your inflation, it’s going to affect your margin, your cost, your pricing, incentive to invest, and thus output potential which is going to feed back into inflation pressure over the medium term. Here, an equally important point is the country’s ability to issue its foreign debt in domestic currency. In Thailand, especially the case of SMEs (small and medium-sized enterprises) export and import don’t necessarily match in terms of currency denomination. Consequently, these SMEs can have a real exposure when currency swings, possibly, triggering off a financial problem which then could feedback into the financial system. Another point is the existence of a credible nominal anchor. In our case, if the current inflation targeting regime works well over the next few years, we will gain more credibility. Then, we can afford to have more exchange rate flexibility. And finally if you have sound, strong, and healthy financial institutions with good risk management systems, again the authorities can allow the exchange rate to swing more with no or only limited repercussions on the financial institutions and the strength of the economy as a whole. But even in such a circumstance, we still have to watch for the unhedged non-bank private sector which is normally the vulnerable point.

All these concerns are going to affect both inflation targeting and non inflation targeting countries alike except that the inflation targeting countries will have one of their hands tied behind their backs. That is they will be bound by the inflation targets. They are not going to be able to use monetary policy to address these shortcomings, not to the full extent of the non inflation targeting countries anyway. Under these circumstances there are two choices; one is to supplement inflation targeting with another set of instruments that is rule-based, transparent, non-inflationary and maybe supplemented by market discipline such as Basel 2 or similar instruments that could help alleviate impacts from some of these issues above without missing the inflation target. The other way is to untie that hand once in a while -- that is to have an “escape clause” for example in case of a supply shock. In this case, I personally have some reservations in that if you keep changing the rules, people will get skeptical and eventually you will lose credibility on inflation targeting. So you need some kind of instrument to supplement this. The question is whether we can actually intervene in the exchange rate market and maintain inflation targeting at the same time. Here, we found experiences in other regions and more recently in our own region as well
from the people moving along that line, that there is a lot of fiscal cost in doing so. This is becoming self-evident and widely known by now. The benefit is obviously the lower volatility of the exchange rate. As a case in point, for example, capital control and independent monetary policy appear to have been working quite well in the case of Malaysia (during the Asia crisis-1997). However, some may argue that the case is quite unique and cannot be generalized to other countries. Similarly, Korea, Indonesia and Thailand are not quite that true floater either. So the bottom line is that there seems to be some room to maneuver in the middle ground and that it is possible to have exchange rate intervention and inflation targeting at the same time.

Now the question is whether capital inflow actually responds to interest rate differential and whether this relationship is robust. From the discussion of our Chilean colleague earlier and confirmed by Thai experiences, it is note that commercial bank credit is the key in driving the business cycle. In the case of Thailand, since 2002 interest rate differential had hardly moved but capital flow in fact reversed from a negative to positive trends. What I found to be a better explanation of this is the log of domestic capital stock index relative to the (US)SP 500 and this explained Thailand’s capital flow with a 99.3% significance. Interest rate differential, on the other hand, does not explain much of the capital flow movements unless you allow up to six months’ lag which may be the time required for short-term interest rate to be translated into prime lending rate, saving deposit rate, and the various bond yields. These are returns that really matter to investors. So some of the reasons why interest rate differential may not explain capital flow movements may be that the transmission mechanism is still underdeveloped. Stock market, on the other hand, captures economic fundamental somewhat better and on top of that it also captures the forward looking expectations of the businesses and consumers as well as political and social environment.

The third point is the explanation why we are still observing that limited exchange rate intervention with inflation targeting seems to be working well. My interpretation is that capital inflow has not fully recovered as yet and that as we have seen capital inflows up to two to three billion dollars per month before the crisis and the level of below one billion at present is still a long way to go. Given the fact that the stock markets in the region, as a whole, have been on their way up since 2004, Thailand’s prospects are compounded further by its being on the lower spectrum of the regional markets up to now.
In conclusion, inflation targeting and managed exchange rate seems to be complimentary for the time being. However, to target both inflation and exchange rate with only one instrument, i.e. interest rate, the authorities will be forced to subordinate one target over the other. Unless we develop a supplementary framework or instrument to cope with this, the exchange rate will then have to be allowed to move if we were to have a fair chance of meeting our inflation targets at all.
General Discussions: The Role of Exchange Rate in Inflation Targeting

Chair: Atchana Waiquamdee

Scott Roger: Let’s take it as given that a country does care about its exchange rate, perhaps for reasons of preserving external competitiveness or it may be because of pass-through effects on inflation. The practical question is how best to take that concern into account in the inflation targeting framework? The experience of Israel, Poland, Hungary, and Chile is that when they tried to have an exchange rate band together with an inflation target, it did not work unless the exchange rate band got widened to something like plus or minus 15 or 40%. Israel widened it to plus or minus 40% at which point it is a meaningless band but when it gets to be much narrower to where it could potentially bite, the market will test the priorities of the central bank. Do you care about your inflation target or do you care about the exchange rate target?

There is a completely different way of doing this and it is by treating the exchange rate concern in the same way most central banks care about output smoothing. They do not want output to be too volatile but that does not mean they set separate targets for output growth. What they do is they have a smoothing term in the reaction function of the central bank. That is one way of dealing with exchange rate concerns. If you don’t have a specific level target you want to defend, but you do care about not having too abrupt movements in your exchange rate, you can do that in your reaction function without setting yourself up for a battle with financial markets.

Claudio Borio: There is obviously a lot that I agree with in the paper. One point where I would take some exception is the table where you provide rules of thumb for central banks to react to particular developments depending only on two conditions – the only information you have on the table – namely, the level of inflation and the direction of the change in the exchange rate. Now, the general point that has come up again and again in the discussions is that, since all of these variables are endogenous, the real question is what is driving them – a point with which I am sure you are very familiar. You suggest that if inflation is low and the exchange rate is appreciating, or is under upward pressure, then one should respond by easing policy. If you put yourself in the shoes of the authorities in the run-up to the Asian crisis, then you might see things differently. At the time, you had very strong capital inflows, partly driven by the
interest rate differential but, crucially, by the growth prospects of the economy as perceived by foreign investors, and particularly by what was happening to the real estate market. People were borrowing to invest in the real estate market. Now, if under these conditions you respond by easing policy, you could actually make matters worse: you would attract even more capital inflows, induce the economy to grow even faster, and exacerbate the build-up of imbalances. The question has to do with what is the nature of the shock and whether the shock is persistent.

**Robert N. McCauley:** It is worth considering the recent experience of Korea. The won has appreciated in effective terms and this has been associated with an undershooting of the inflation target. Yet the Bank of Korea has been raising interest rates, evidently guided by a desire to normalise interest rates in the face of asset inflation, but not by the exchange rate or the inflation rate. It is not a dilemma case as between the exchange rate and the inflation rate, but rather between these both and other considerations. Korea is also an interesting case in terms of the responsiveness of the currency to capital flows and the implications for monetary transmission. There have been times where the Bank of Korea has made surprising changes in the policy rates and the exchange rate responded in a manner at variance with the textbook. For example, a surprise reduction in the policy interest rate can be taken to be good news for the stock market, and the consequent increases the capital inflow can put *upward* pressure on the currency. If equity flows dominate the capital account, it is possible that the textbook effect of interest rates on the exchange rate might be reversed.

**Hans Gensberg:** I would like to raise three questions. First, do you have in mind that the exchange rate is in the objective function, an instrument or in the reaction function of the central bank? Second, given that inflation targeting is a forward looking framework, and with numerical targets, do you also have in mind, announcing a future exchange rate path or level with a numerical target that the central bank ought to aim for in your framework? How do you deal with changes in the equilibrium real exchange rate? And what is your assessment of how important such changes are in the countries that you have in mind? My understanding was that, for instance, the difference between the experiences of New Zealand and Australia in the context of the Asian crisis was exactly the problem of knowing where equilibrium real exchange rate was after a particular shock.
As for the final question, do you see a problem related to the “n-1” issue? If you have a region where all countries in the region peg to some basket or currency, how do you resolve their “n-1” issue?

Amando M. Tetangco, Jr.: Dr. Ito mentioned that the Philippines managed exchanged rate less than other countries in his paper. This reflects the policy that we have and that is basically to allow market forces to determine the exchange rates and just participate in the market to smoothen sharp fluctuations. We don’t go against the fundamental trends. It’s an appreciation or depreciation. It’s symmetrical. The policy is applied on both sides of the exchange rate. On the question of the motivation of central banks in managing the exchange rates, apart from maintaining export competitiveness, this will have to be considered in the light of what is happening to the other currencies as well. What would be a situation where all the currencies in the region are basically stable against a basket of currencies? What would be a fair value for the exchange rate? What usually would be considered more or less as equilibrium exchange rate and how to measure this? If the other currencies are moving in the same direction, individual countries will have relatively more flexibility to go with that trend because in relative terms competitiveness is probably not changing significantly.

Khor Hoe Ee: I agree that if you have an exchange rate band, the market would test you on it but the experience in the region is that you can have a managed float without having a band. You do not necessarily need to have a band but you can have a view on the exchange rate. It is not as though you would be against any appreciation in the exchange rate. Exchange rates can appreciate at different rates and we have seen that in the region. Over time, you are going to have a divergence in the movements of the regional exchange rates reflecting the developments, underlying economic fundamentals and productivities of the economies.

Takatoshi Ito: I will take the comments by Khor Hoe Ee as more of a confirmation that Singapore is a pragmatic country. To try to target both the exchange rate and the inflation rate although it does not declare as inflation targeting or exchange rate targeting so it’s all implicit but both variables are very important and recognized. Both trade off and complementary between inflation targeting and exchange rate targeting means that exchange rate is being managed although “management” has to be defined carefully. Also he acknowledged that the exchange rate is very important from the producer’s point of view in many of the Asian countries. It also comes up in Dr. Pichit’s
arguments that how important the exchange rate is to the economy depends on
the openness and industrial structure. So for some small open economies with a
lot of exports, it may be appropriate to pay more attention to the exchange rate
than other countries. Dr. Pichit’s point is that it may be just lucky that pursuing
two objectives have appeared successful and obviously no major disaster
happened since the last crisis, whether that is luck or not large capital inflows or
outflows experience, it remains to be seen. Bob McCauley mentioned that Korea
is now finding itself in a very difficult position. With a lot of capital inflows but
stable inflation, at the same time, asset inflation is going on. So it is more than
just exchange rate but asset inflation that is prompting them to tighten in the
midst of a stable inflation rate. So we have to probably widen the scope of the
discussion to exchange rate, asset prices, supply shock and inflation targeting.

Scott asked why Israel, Poland, Chile, Hungary failed to pursue two
objectives. I am not familiar with the details of these countries but case by case
we can argue about what went wrong. Maybe wrong control points for the
exchange rate and inconsistent objectives. It really depends on the country and
the ability to manage. For the question, whether exchange rate should be in the
loss function. A loss function should have output gap and the inflation rate gap
but exchange rate is an interesting variable which affects both of them. That’s
what I tried to develop from the matrix of our exchange rate and inflation. So it’s
not a loss function in my mind. It’s more of interesting disturbances which work
in the interest rate, inflation and output gap. I see it as more of a noisy variable
than endogenous to other variables.

I take Claudio’s point that I should be careful discussing the nature of the
shock and exchange rate shock could come from various others more
fundamental shocks than just the fickleness of the investors so I will try to
develop that behind the exchange rate shocks.