Commentary: Core vs. Headline
Inflation Targeting in Thailand
Akira Ariyoshi

First, let me thank the organizers for inviting me to this conference and giving me an opportunity to comment on the excellent paper by Bob McCauley. Let me also clarify at the outset that the views expressed here are my personal ones and do not necessarily reflect the views of my current and past employers.

The organizers of this conference ought to be congratulated for selecting a timely topic for this session. The choice of index in inflation targeting has always been a subject of debate, but has heated up recently with Charlie Bean’s discussion at the Jackson Hole Symposium in August, which triggered a number of commentators to pick up the topic. The background to this debate is, as demonstrate by Bob McCauley in his paper, is the persistent gap between headline and core inflation in recent years, combined with the fact that this is driven by the increase in energy prices which in turn reflect rising demand, particularly in China and India.

Bob’s paper tackles this issue head-on, by asking for Thailand whether core inflation continues to be a good intermediate target to achieve what he believes is the ultimate object of stabilizing headline consumer price inflation. He concludes that the stable and predictive relationship between core and headline inflation no longer holds, and therefore core inflation may no longer be a desirable intermediate target. He also notes that alternative measures of core inflation does not do a good job, implying that it may be better to move to a direct targeting of headline CPI. At the same time, the paper observes that, based on the monetary policy announcements, the Bank of Thailand is already signaling to the market that it looks at headline as well as core inflation measure, and therefore the switch from core to headline may be implemented without large friction.

Notwithstanding his careful analysis, for a number of reasons, I am a little hesitant to agree with his concluding line that “core inflation abandoned us”

The first is the simple observation is that recent episode of sustained upward deviation of headline from core CPI inflation will most likely not continue. The high increases in energy and commodity prices over the last few
years were driven not only by the growth in China and India, but reflect unusually healthy growth of the world economy, including of the United States. Ample liquidity has also fuelled financial investment into commodities, which many observers believe further accelerated the rise in commodities prices. As the global cycle turns – both financial and real, we would expect to see energy prices to stabilize or decline, as it has in fact been doing recently. While we cannot rule out the possibility that going forward energy prices will exert a systematic influence on inflation, an alternative possibility is that while volatility would remain large, the behavior would not be such that there would result a clear declining of core with headline inflation. In other words, “core may have left us for a while, but may not have really abandoned us”

The second, somewhat more substantive and a theoretical point, is whether the merit of targeting core CPI should be judged solely on the basis of its suitability as an intermediate target in stabilizing headline CPI. As Bob notes, if there are institutional and behavioral characteristics such as a close link between headline CPI inflation to wage settlements, then that would argue for using headline inflation as target, in which case the value of core inflation as a target could be sought in its desirability as an intermediate target. On the other hand, theoretical work on optimal monetary policy tells us that we should attempt to stabilize prices that are sticky, which would tend to prefer targeting core as opposed to headline because of the highly elastic nature of commodity prices.

Bob make the valid and important point that even when countries claim to target headline inflation, adjustments are made so that the standard published headline inflation is not necessarily used. Indeed, headline CPI is just one measure of inflation, and is perhaps used for its familiarity more than anything else.

When relative prices diverge, there will always be the question of what constitutes the “correct” inflation measure for monetary policy. It is not something that is unique to core vs. headline inflation. Recently in Japan, there was a big debate as to whether a positive year-on-year change in CPI indicated an exit from deflation, with the point being made by critics that GDP deflator was declining by 1% or more. This is in some sense a mirror image of Thailand or US problem but with focus on deflation rather than inflation: with rising import prices and a limited initial pass through, GDP deflator will initially decline, while CPI and other indicators which have a direct import component will rise.
In any event, it may not be too worthwhile to determine what is the “best” index that the central bank should attempt to control as a target variable. What monetary policy aims to do is to control inflation as a monetary phenomenon. Even if an inflation targeting framework based on a specific price index, the central bank will not have a mechanical response based on deviations of that index from target, but will look at a range of indices and the factors influencing the movements in indices to decide on the policy on the policy response in a forward-looking manner.

This leads to my third and a practical point, and at in my mind the most important, is the choice of a target that is most conducive to monetary policy credibility and central bank accountability. The value of inflation targeting is not necessarily in how the central bank may lower and reduce the variability of actual, measured inflation, but lies also in managing inflationary expectation.

From that viewpoint, it is true that a persistent gap between core and headline may affect adversely on the credibility of monetary policy. The recent debate has some inkling of that concern. The central bank’s commitment to stabilizing prices may be brought into question if headline inflation continues to run at well above the core rate and the central bank refuses to react to that. If the public interprets this as sign of the central bank’s willingness to accommodate inflationary pressures, or that the central bank is misreading the potential second round effects, then there is the risk that inflationary expectations become unanchored.

Nonetheless, this does not necessarily mean that headline inflation would necessarily make monetary policy more credible. Headline inflation rates are more difficult to control and in some cases not appropriate for central banks to react to changes in them. This means that the central bank may need to either revise the target or allow actual inflation to deviate from target more frequently than in the case of core inflation targeting. This could reflect adversely on the credibility of monetary policy.

Credibility is also linked with accountability. central banks are given a great deal of independence for an important public policy, which is somewhat atypical in democratic system. A strong system of accountability is thus important for the central bank to maintain legitimacy in its independence. Beyond the technical nature of the debate on what index is better, there is a need for a public acceptance that the central bank can be expected to behave in a responsible fashion under the inflation targeting in place.
A public debate on the inflation targeting regime is a healthy reflection of the trust building exercise. Nonetheless, beyond the technical and professional debate, if there is not so much of mistrust in the existing scheme, it may not be that good an idea to make changes based on perceived marginal improvement. Changes, if not communicated properly and do not receive public support, could undermine the credibility of the central bank; if despite the good intention of the central bank, the changes are seen by the public as a ‘shopping exercise’ by the central bank to simply deflect criticism or to reduce accountability.

Inflation targeting adopted by Bank of Thailand and other central banks have served those countries well. Nonetheless, there are possible challenges in maintaining and possibly improving on this track record. The biggest challenge, as reflected in Bob’s discussions on international aspects, could be the challenges of globalization. The IMF’s World Economic Outlook published in April this year looked at the impact of globalization on inflation. The study showed that for industrialized countries, globalization has impacted inflation not just directly through import prices but by also reducing the sensitivity of inflation to domestic capacity constraints and through large changes in relative prices. While overall these have helped to reduce inflation, the same cannot be assured going forward. The divergence of core and headline inflation is just one ramification, and we would need to continue to look carefully at both the framework for and operational response in inflation targeting.
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Inflation Targeting in Thailand
Amara Sriphayak

Thank you. Let me start with the usual disclaimer. The views I am about to express are my own and not necessarily those of policy makers at the Bank of Thailand. However, there has been much discussion about this topic at the Bank of Thailand. At least once a year the MPC reviews the appropriateness of the inflation target, so even though I gave the disclaimers, some points that will be discussed are the MPC’s views, and these appear in the Bank’s Inflation Report.

I would like to focus my comments on the following points. Firstly, I would like to propose a philosophy for an appropriate inflation target and then examine international practice about whether headline or core is the most appropriate measure. Secondly, I would like to answer, and pose, questions about whether core is still a good measure specifically for Thailand and raise some points for consideration regarding the confusion involved in the Thai case.

Let us start with the first point. Bob has started off with various arguments as to whether core or headline should be the appropriate target. In my view, I would like to propose a philosophy, and a possible view about why we still have core inflation as our policy target. The ultimate goal of monetary policy is a low and stable inflation rate, which can support long-term sustainable growth. But noise and volatility such as farm and energy prices are beyond our control. Monetary policy involves demand management, so economic decisions are based on long-term factors. As Bernanke (2004) stated, the optimal long run inflation rate is the level of inflation that achieves the best average economic performance over time with respect to both inflation and output objectives. Variation of actual inflation around this optimal rate over the business cycle would be expected and is acceptable. So how can we deal with noise and volatility? Supply side volatilities are beyond our control. Monetary policy can affect only the underlying inflationary pressure. Thus it should focus on the more persistent movements in inflation. There are two possible methods of getting around supply side noises. One is to use CPI excluding volatility items, sometimes referred to as core inflation, sometimes referred to as CPIX as in Bob’s paper. Another way is to smooth the volatilities by using average measures such as long-term annual, or medium-term figures. Over the long run, the headline and core rates will converge.
Let’s consider the definition of convergence, which relates to the decision to switch from core to headline. Convergence in economics implies that two times series have the same values in the long run. However, headline and core, by definition, are not supposed to have the same values, even in the long run. The two series could intersect every now and then, but not remain together over time. Convergence, over the long-term implies that the average of headline and core are close together. In Bob’s paper, about 22 countries, excluding Thailand, are inflation targeters. As far as I can get hold of the data, among these 22 countries, six had high inflation, seven had headline and core convergence, two had no convergence at all and two had no clear evidence of convergence due to changes in the data series. So let’s take a look at the high inflation countries. These countries are mostly in Latin America or Eastern Europe, and implemented the inflation targeting regime during periods of high inflation in order to disinflate their economies. Their current target would have been CPI, but that the period is the medium term, or annual. The series start with very high inflation, such as 30 or 40 percent, with the inflation targeting framework being designed to bring down this very high level. For the second group of countries, those showing convergence, there is a choice of either CPIX, core or CPI as a target. But the average mean of CPI and CPIX can be seen to be close together. That is why I grouped these as convergence countries, for which the volatility of the CPIX is much less than CPI. If we take a close look at all the series of these countries, now and then, the CPI and CPIX come together, but averaged over a long period of time, the CPI and CPIX are fairly close. For New Zealand and UK, changes in the data series mean they cannot really be grouped as to whether they show convergence or not. Another two countries for which the series show no convergence are South Africa and Brazil. The averages are significantly different and never really converge. So they chose headline, which is easy to communicate, reflects the real cost of living and is transparent. But, in using headline, they tried to use a longer horizon.

In conclusion, the decision of each country as to the use of headline or core depends on whether there is high inflation. If inflation is high, they tend to use CPI headline. But for low inflation, we have to ask whether the two series, the CPI or CPIX, converge or not. If not, we might as well use CPI. If they do converge, we must ask further whether headline is more volatile. If it is, we should use core or use CPI over the cycle in the medium term. If headline is less volatile, then it is okay to use CPI.

Now we come to the Thai case. Bob separated the periods before and after the adoption of inflation targeting. Prior to 2000-the year of adoption of inflation
targeting, headline and core seemed to coincide with an average of about 4.5-4.6 per cent. Even extending the period to 2002Q3, these averages of headline and core are still almost the same at around 4 per cent, and core is less volatile than headline. Only the period 2003Q4 onward had the problem of headline and core divergence, but this was not the first time it was observed. However, in previous occurrences it was not so persistent, lasting only about 3 to 4 quarters, while this time the magnitude and persistence were relatively high. The reason behind this was the increases in energy and raw food prices, which made inflation in this period more persistent. If we look at the correlation between core and the energy price, we can see that movements of the energy price seems to pass through to headline straight away, while the transmission to core seems to take quite a long time. The second round effects did not come fast enough having no correlation at all for the same period, and even lapsed one to three periods. According to the April Inflation Report, the MPC have been concerned about the divergence between core and headline and the persistence of the high oil price. The core still has not got the second round effects, because of the stabilizing policy from the oil fund. But once when benzene and diesel float, the domestic retail petroleum price can pass through to the headline inflation straight away, so the headline seems to peak in the first half of this year and then even though the assumption of the world oil price for next year and the year after is going to be quite high, we will not see the year-on-year growth of the oil price as high as before. With the base effect, headline inflation is going to come down and converge with core inflation in early 2007, and the MPC made that point in the April Inflation Report. Hence, core inflation is still a suitable target for monetary policy in the pursuit of price stability.

In the latest Inflation Report in October, which just came out, the MPC also tested (because the oil price came down) whether high and low oil prices have the same effect on CPI and core symmetrically or not by putting dummies for the high and low oil price periods. The conclusion is that headline inflation adjusts to the rise and fall of oil prices symmetrically, and the pass-through is immediate. In contrast, the rise in oil prices in the most recent period would be passed through to core inflation while the fall in oil prices does not significantly affect core inflation. So core inflation only adjusts to rises in oil prices and has more persistence than headline inflation, which is largely a result of public transportation fares and that is the picture that shows how transportation tends to respond to positive rather than downward movements. With those reasons, the latest forecast of the MPC for the headline and core, even if it still diverges, has come closer by the first quarter of 2007 and has a high probability that it could come to the same point, and even higher probability in the next year. If we
suppose that we use headline as the target, rather than core, the way the policy has to respond to the high oil shock may have to be even faster. (From slide 23) This is the time (2004Q3) to start the up cycle of the interest rate cycle. The headline is almost at the upper band of the target (0-3.5 per cent) already, while looking at potential output, the output gap is still positive. So that means the response is going to be much higher and does not respond to the demand side pressure.

In conclusion, whether we do or not change the target, and whether it is appropriate to change, depends on various factors. We have to consider not only whether or not there is divergence, but also whether it is going to be achievable or not. How we communicate the policy is important in anchoring inflation expectations. Monetary policy must seek to ensure that the higher cost does not trigger a wage price spiral that results in an inflationary process. Finally, after all the things that I have shared with you, I would like to express the view that core inflation has not yet abandoned us. Rather, whether or not we abandon core inflation is the question, and I think we should leave it for the MPC to decide.
General discussion: Core vs. Headline Inflation Targeting in Thailand

Chair: Atchana Waiquamdee

Scott Roger: As I see it there are three issues here. One is about the role of core inflation in policy communications, a second is about the usefulness of core inflation in the policy decision-making, and the third is reworking history, (and it is policy related). I will go through each of these quickly.

First in the area of policy communication - I think the international practice of targeting the headline CPI inflation is essentially for communication reasons and here I am very sympathetic to Bob’s point of view.

If you were starting with a blank sheet of paper, would you still choose to target the core rate or would you set your target in terms of the headline rate? If I were starting with a blank sheet of paper, I would target the headline rate because I think it is much easier to use in policy communications and particularly if there are shocks. In this case, you explain why you are not going to react to certain development in the headline rate. You use core measures to help you tell that story. Alternatively, if you set the target in terms of the core rate, then you have to say, well despite the fact core did not move we’re going to tighten policy, and it just becomes a more difficult story telling device.

There is another issue in communications and that is if you set the target in terms of the headline and then use core measures to help to explain the story, you can use a variety of measures of core inflation without tying your colors to a single measure, whereas if you target a core measure, you tied to one particular measure, whatever its faults.

With regard to the usefulness of the core measure, Bob pointed out that there are issues of bias and causality, and he is right on both scores that these are important considerations. My quibble is the same as Amara’s, that the time frame that you need to look at is a lot longer than four years and you should probably be looking at twenty years and making your decisions on that basis, not just on what has happened in this part of the business cycle, essentially in response to a single shock. Now whether you call it global or whether you just call it an oil shock, I do not care; it is essentially one shock.
Another aspect is the use of this core inflation measure as an operational guide. Has it really abandoned you? And so I ask myself the question, would policy in Thailand have run better if interest rates had been set in response to developments in headline inflation rate? Would the macro situation have turned out better if policy had tightened in late 2002 and early 2003 when headline inflation was picking up but core was not. From this perspective it is not clear to me that policy would have done a better job.

A residual issue, which Bob has raised indirectly, and Adam is going to come back to tomorrow and which I hinted at it earlier this morning, is how you should deal with persistent relative price shocks. We have not thought a great deal about this but I think it is a live policy issue.

**Takatoshi Ito:** This is a question to Bob. I will try to be the Devil’s advocate. If Thailand switches from core to headline and headline is more volatile and Bob says if hitting target is important and to adopt headline will probably widen the band so right now with core it is 0-3.5, with headline what would be the appropriate range? 0-6, would that be a bit too wide as a target? Second question, why not just stay with core and educate the public, educate the labor union that core is the right measure and wage negotiation should not look at the headline but the core. It is a less volatile measure and you can narrow the band, that is much better; just educate the public.

**Robert N. McCauley:** As Mervin King argued a year ago, one way of looking at the run-up in commodity prices is that it reflects strong global demand. And rapid global growth owes much to China and India. So it is partly a judgment of how persistent that relative price change will be. I take Ariyoshi-san and Khun Amara to be agreed on the view that core and headline have only parted ways for a time. In contrast, I cast that global development in the same role as financial innovations in the early 1980s. Financial innovation was given credit for undermining previous regularities that had existed between the monetary aggregates and the things you cared about - inflation and nominal GDP growth and that was behind the abandonment of the monetary aggregates. China and India are no less world historical developments than the force of financial innovation.

In the discussion in North America, Charlie Steindel and a colleague argued that no core measure actually made sense or worked for the United States in the sense of tracking headline inflation. Their argument questioned whether the Federal Reserve System should move to an inflation targeting system
constructed around a core measure. Researchers at the Bank of Canada used an identical reasoning (test) to argue that core is functioning very well, thank you very much, for the Bank of Canada in terms of tracking what they care about which is headline inflation. That same sort of test applied to the Thai data comes out resoundingly on the side of Steindel and his colleague and not at all like the findings with the Canadian data. Now things may change and admittedly the period is short.

Scott Roger posed the question, “Would things have been better if the Bank of Thailand had been responding to headline rather than core?” My reading of the announcements and what core and headline were doing in the middle of 2004 when the tightening cycle began here is the Bank of Thailand quite appropriately did respond to the development of the headline. People in the market in late 2004 were asking, “How is it that the core measure is not only in the south half of the range but far down in the south end of the range and the Bank of Thailand is moving up the policy rate?” My interpretation is that there was a sense that the core was in danger of not serving as a useful guide to the variable of interest and, to my mind, policy appropriately did respond to the challenge.

If you are sure that the divergence between core and headline is a temporary thing, then it might be possible to succeed in the educational mission suggested by Taka Ito. But it is not going to be an easy sell, I should think. And as for the appropriate range, I suppose the suggestion based on the experience with living at the zero lower bound is that the bottom end of the range should be raised from zero. But if you think there is a question of where you want the center of the band to be in relation to the inflation habits of immediate trading partners, it begins to be difficult. So a wider range with the headline as target does not seem to me to be an obviously absurd suggestion.

Achana Waiquamdee: Let me respond to Professor Ito about our band. When we look at a 0 to 3.5% target range, it may seem that we have a very wide range. I think Thailand is the only country in the world that uses quarterly average instead of annual or over the cycle. That is why the band is a little bit wide. But perhaps when we move towards annual or over the cycle, maybe we will narrow the band a bit. But of course, if we move to headline, maybe we have to consider a long the time horizon when the target is applied.