

Search

Inflation targeting matters in Asia

Stefan Gerlach Peter Tillmann

7 October 2010

[Print](#)
[Email](#)
[Comment](#)
[Republish](#)

How do I...

- [Create an account](#)
- [Receive the Weekly Digest email](#)
- [Join a Debate](#)
- [Submit an Event](#)
- [Post Comments](#)
- [Add a tag](#)
- [Send feedback](#)

Founding Contributors

- [Alberto Alesina](#)
- [Richard Baldwin](#)
- [Erik Bergl f](#)
- [Giuseppe Bertola](#)
- [Olivier Blanchard](#)
- [Tito Boeri](#)
- [Willem Buiter](#)
- [Michael Burda](#)
- [Stephen Cecchetti](#)
- [Daniel Cohen](#)
- [Juan Dolado](#)
- [Esther Dufo](#)
- [Barry Eichengreen](#)
- [Jeffrey Frankel](#)
- [Francesco Giavazzi](#)
- [Rachel Griffith](#)
- [Philip Lane](#)
- [Philippe Martin](#)
- [Richard Portes](#)
- [Carmen M. Reinhart](#)
- [Anne Sibert](#)
- [Guido Tabellini](#)
- [Shang-Jin Wei](#)
- [Charles Wyplosz](#)

My account

- [Create account](#)
- [Reset password](#)
- [Login](#)

Navigation

- ▶ [Debates](#)
- [My Unread](#)
- ▶ [Create content](#)

Following the Asian financial crisis of 1997-98, many of the region's countries adopted inflation targeting. This column compares the persistence of inflation between those with inflation targeting and those without, finding that inflation persistence falls in the former. Nevertheless, the behaviour of inflation still varies across inflation-targeting economies.

In recent years a number of Asian central banks have adopted monetary policy frameworks with explicit inflation targeting. Following the Asian financial crisis in 1997-98, South Korea, Indonesia, Thailand, and the Philippines all adopted inflation targeting within four years. Their motivation was the same as that of advanced countries such as Sweden and the UK who also made the switch – the need to introduce a new anchor for monetary policy following the abandonment of a fixed-exchange-rate regime (Filardo and Genberg 2010, Ito and Hayashi 2004).

With the global imbalances remaining a source of dispute, the issue of nominal anchors is set to make a return, especially as countries face the growing risk of destabilising levels of inflation. Indeed, in a recent [Vox column](#), Jeffrey Frankel (2010) argues that commodity exporting countries, such as those in South America and the Caribbean, should adopt “product price targeting” rather than exchange-rate and consumer price index targeting, which he argues are less robust to terms-of-trade shocks.

Evaluating inflation targeting in Asia

In a recent paper (Gerlach and Tillmann 2010), we explore how successful these policy choices have been, looking at data from economies with and without inflation targeting in Asia. This is an interesting issue since the literature to date has not drawn any clear-cut conclusions. While Goncalves and Salles (2008) and Lin and Ye (2009) find a significant decline in inflation after the adoption of inflation targeting, Brito and Bystedt (2010) do not. These authors judge success essentially by computing the average inflation and its variance since the adoption of the inflation target. However, while it seems natural to do so, it is possible for the average inflation rate to be close to target, but deviations of inflation from target may nevertheless be large and protracted.

We therefore use an alternative metric of success and study how persistent shocks to inflation are. The intuition is straightforward: deviations of inflation from target will be temporary if the central bank is effective in stabilising inflation. In fact, a number of authors have argued that the persistence of inflation has fallen in many industrial countries in recent years, and have suggested that this is due to the greater focus on inflation stabilisation by central banks (Levin and Piger 2006 and Benati 2008).

Does inflation targeting matter?

We measure inflation as the annualised percentage change of the Consumer Price Index (CPI). The data spans the period 1985:1 to 2010:1. We first compare inflation persistence in Asian economies before and after the Asian Financial Crisis in 1997-98, which led several Asian economies to adopt inflation targeting. Since the crisis period was very turbulent, the pre-crisis sample ends in 1997:2 and the post-crisis sample starts in 2000:1.

First we consider the Asian inflation-targeting countries, to which we add Australia and New Zealand. Our results point to a significant reduction in inflation persistence for all countries with the exception of Indonesia. For instance, persistence in Korea is estimated to be 0.97 prior to the Asian financial crisis, i.e. between 1985 and 2007. In the post-2000 subsample, persistence drops to 0.59.

Turning to the Asian comparison group, we note that persistence in the 2000-2010 subsample increases for China, Hong Kong, and Japan. Malaysia and Taiwan experience a fall in persistence, which is, however, small compared to the group of inflation-targeting economies.

Table 1 compares persistence of average inflation across three groups of countries. In Asian inflation-targeting economies, persistence declines even stronger than in non-Asian inflation-targeting economies, while in Asian non-inflation-targeting economies persistence increases.



Stefan Gerlach

Professor of Monetary Economics at the Institute for Monetary and Financial Stability, Johann Wolfgang Goethe University of Frankfurt and CEPR Research Fellow



Peter Tillmann

Professor of Monetary Economics at Justus-Liebig-University Giessen

Table 1. Estimates of inflation persistence

Group	Sample period	Sum of AR coefficients	90% confidence band
Asian economies	IT 1988:3	- 1.02	[0.88, 1.07]
	1997:2		
	2000:1	- 0.30	[0.08, 0.52]
	2009:4		
Asian non-IT economies	1988:3	- 0.81	[0.64, 1.04]
	1997:2		
	2000:1	- 1.01	[0.85, 1.08]
	2009:4		
Non-Asian economies	IT 1988:3	- 1.00	[0.93, 1.03]
	1997:2		
	2000:1	- 0.71	[0.41, 1.10]
	2009:4		

Notes: Persistence estimates for the average (weighted by GDP size) inflation rate. The group of Asian IT economies comprises Australia, Indonesia, Korea, New Zealand, the Philippines and Thailand. The group of Asian non-IT economies consists of China, Hong Kong, Japan, Malaysia, Singapore and Taiwan. The group of non-Asian IT economies comprises Canada, Chile, Israel, Norway, South Africa, Sweden and the UK. The confidence bands are obtained from bootstrapping.

Comparing the persistence rather than the level of inflation thus reveals that inflation targeting has indeed had a positive effect on the inflation process of the Asian economies we study.

To illustrate the behaviour over time of the persistence measure, we use a moving 40-quarter window. The resulting series of persistence estimates together with bootstrapped 90% confidence bands are reported in Figures 1 to 4. While a reduction can be observed for all inflation-targeting economies, the rolling window evidence reveals interesting differences with respect to the timing of this reduction. The fall in persistence is not synchronised across countries. Inflation persistence in Korea (see Figure 1) and Thailand (Figure 2) falls immediately after the new monetary regime became effective. The Philippines (Figure 3) meanwhile, experiences a small drop in persistence immediately after the adoption of inflation targeting. A substantial reduction occurs only at the end of the sample period. Likewise, persistence reduces much later in Indonesia than in the other countries. The evidence also points to an increase in persistence as the financial crisis that started in 2007 unfolds.

Figure 1. Sum of autoregressive coefficients with 90% confidence band based on a 10-year rolling window for Korea

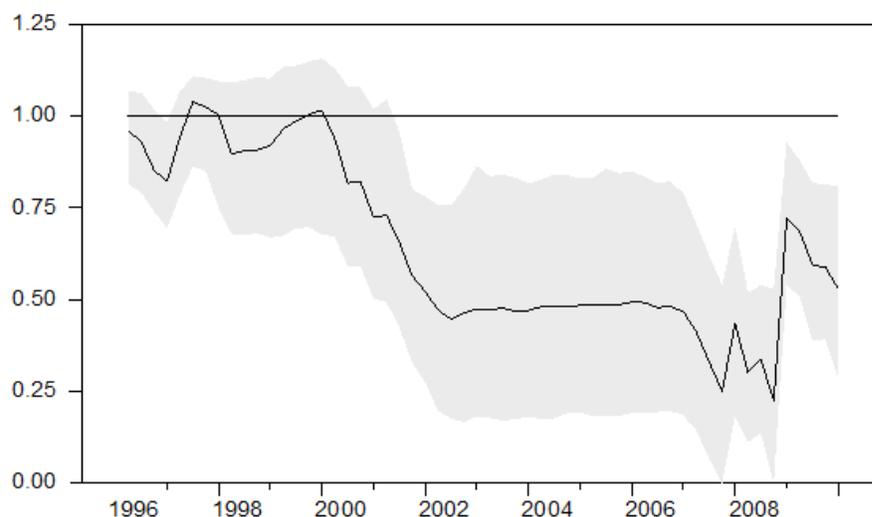


Figure 2. Sum of autoregressive coefficients with 90% confidence band based on a 10-year rolling window for Thailand

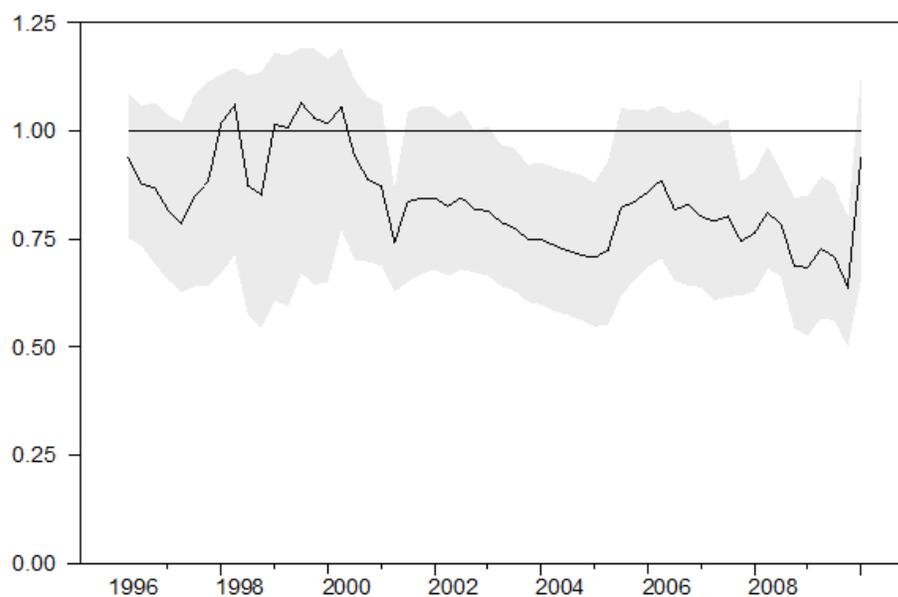


Figure 3. Sum of autoregressive coefficients with 90% confidence band based on a 10-year rolling window for the Philippines

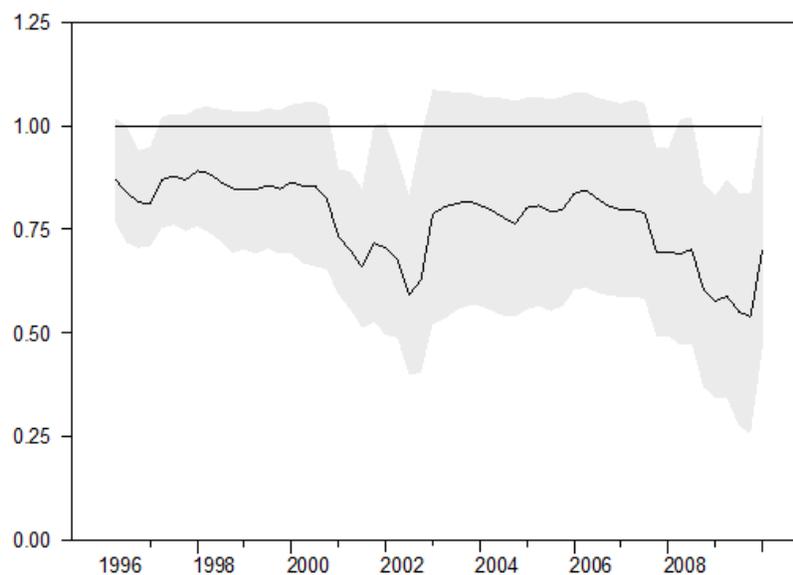
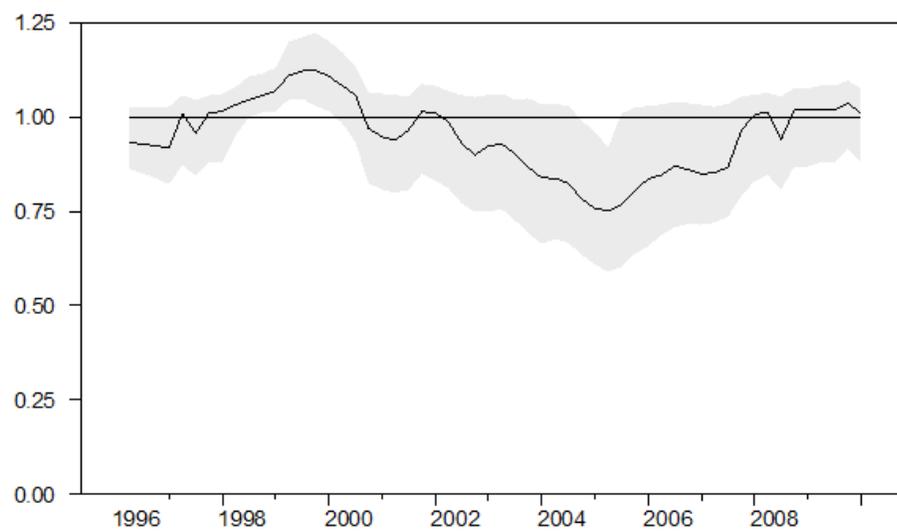


Figure 4. Sum of autoregressive coefficients with 90% confidence band based on a 10-year rolling window for Hong Kong



The results for the Asian non-IT economies are remarkably different. For most economies, persistence fluctuates around unity. Examples are given in Figure 4 for Hong Kong. Overall, the results point to significant differences between economies with a formal inflation target and those without. While inflation persistence falls in the first group, it remains roughly unchanged in the latter. Nevertheless, the behaviour of inflation persistence remains heterogeneous even across inflation targeting economies.

One potential reason for the differences between, say, Korea and Indonesia, is that some Asian central banks continue to attach great weight to the exchange rate in the formulation of monetary policy despite the adoption of inflation targeting. While this may be surprising from the perspective of central banks operating with inflation targeting elsewhere, policymakers in Asia may be particularly concerned about the exchange rate in light of the inherent risk of currency mismatches in the financial sector, as suggested by their experiences during the Asian financial crisis. Moreover central banks, well aware of the high export dependence of Asian economies, may be concerned that exchange-rate changes may impact on inflation and economic activity, which are both goal variables for central banks with inflation targeting.

References

- Benati, L (2008), "Investigating inflation persistence across monetary regimes", *Quarterly Journal of Economics* 123, 1005-1060.
- Brito, RD and B Bystedt (2010), "Inflation targeting in emerging economies: Panel evidence", *Journal of Development Economics*, 91:198-210.
- Filardo, A and H Genberg (2010), "Targeting inflation in Asia and the Pacific: lessons from the recent past", in D Cobham, Ø Eitheim, S Gerlach and JF Qvigstad (eds.), *Inflation targeting twenty years on*, Cambridge University Press.
- Frankel, Jeffrey (2010), "Monetary anchor options for commodity exporters: How does "product price targeting" stack up against the alternatives?", VoxEU.org, 2 October.
- Gerlach, S and P Tillmann (2010), "Inflation targeting and inflation persistence in Asia", unpublished, Goethe-University Frankfurt.
- Goncalves, CES and JM Salles (2008), "Inflation targeting in emerging economies: What do the data say?", *Journal of Development Economics*, 85: 312-318.
- Hansen, BE (1999), "The grid bootstrap and the autoregressive model", *The Review of Economics and Statistics*, 81:594-607.
- Ito, T and T Hayashi (2004), "Inflation targeting in Asia", HKIMR Occasional Paper No. 1, Hong Kong Institute for Monetary Research.
- Levin, AT and JM Piger (2006), "Is inflation persistence intrinsic in industrial economies?" Unpublished, Board of Governors of the Federal Reserve System.
- Lin, S and H Ye (2009), "Does inflation targeting make a difference in developing countries?", *Journal of Development Economics*, 89:118-123.
- O'Reilly, G and K Whelan (2005), "Has Euro-area inflation persistence changed over time?", *The Review of Economics and Statistics*, 87:709-720.

This article may be reproduced with appropriate attribution. See Copyright (below).

Topics: [Monetary policy](#)

Tags: [Asia](#) [inflation targeting](#) [monetary policy](#) [nominal anchor](#)

Bookmark this: [del.icio.us](#) | [Digg it](#) | [Tailrank](#) | [Reddit](#) | [Newsvine](#) | [Furl](#) | [Connotea](#) | [Technorati](#)
[Print this](#) | [Email this](#) | [Republish this](#) | 1607 reads

Comments

Comments (0) | [Login to post comments](#)

VoxEU.org

[Copyright](#) [Contact](#)