Twenty Years of
INFLATION TARGETING

Lessons Learned and Future Prospects

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The first country to adopt inflation targeting (IT) in its formal definition
was New Zealand, which first announced a consumer price index (CPI)
inflation target in 1989 as part of its economic reform and restructuring
effort. IT was therefore twenty years old by the time of the conference in
Oslo at Norges Bank, Norway's central bank, in June 2009 at which the
contributions in this volume were originally presented – a conference
sponsored jointly by Norges Bank and the Institute for Monetary and
Financial Stability (IMFS) of the Goethe University in Frankfurt. The
anniversary seemed a good time for some deeper and longer reflection.
In organising the conference and putting together this book, we therefore
sought answers to a wide range of questions, from the nature and causes of
the spread of IT through the degree of its success as a monetary policy str-
ategy to the ways in which it is developing and may develop in the future.

Formal inflation targeting can be considered as involving (i) the prior
announcement of a quantitative target for a specific measure of inflation;
(ii) an emphasis by the central bank as policymaker on communicating
both the reasons for the decisions it has taken and the type of decisions
it is likely to take in the future, including in particular the publication
of its inflation forecasts; and (iii) a high level of accountability for the
central bank via the publication of information on its decisions and reg-
ular appearances before relevant public bodies. While many researchers
in this area, and most of the contributors to this volume, regard the
announcement of a target as a *sine qua non* for inflation targeting, some
focus more on the operation of policy by central banks, and consider the
Federal Reserve Board in the United States and the European Central
Bank (ECB) of the European Union (EU), for example, as (informal
or implicit) inflation targeters (ITers). However, these two banks have
shown no inclination so far to announce the targets that would qual-
ify them as formal or explicit inflation targeters under the conventional
definition.

The opening remarks by Jan F. Qvigstad, deputy governor of Norges
Bank, provide a brief Norwegian perspective on IT, with an illustration

of the application of Norges Bank's five criteria for a good interest rate path. Athanasios Orphanides, governor of the Central Bank of Cyprus and member of the Governing Council of the ECB (and before that an economist at the Federal Reserve Board for nearly twenty years), offers some perceptive reflections on IT from an agnostic point of view.

Scott Roger's overview, which updates his earlier work with Mark Stone (2005), covers the introduction and spread of IT, the key features of its operation in different countries, its contribution to macroeconomic and inflation stability, and the challenges it faces in the future. He finds, for example, that IT countries have typically had larger improvements in macro-performance than non-IT countries, but have not ended up with better performance than non-ITers. On the other hand, ITers seem to be doing better than non-ITers in the financial crisis period (so far). Klaus Schmidt-Hebbel brings together a large amount of very recent work in this area, looking more closely at the reasons countries have adopted IT and at the effect on inflation of adopting IT. In terms of the latter, a range of different results have been found, depending on what countries ITers are compared with. However, there is evidence that industrial ITers have lower long-run inflation than industrial non-ITers. He also finds that ITers have improved the efficiency of their monetary policy, but remain less efficient than a control group of high-performing non-IT industrial countries.

Daniel L. Thornton takes a rather different tack in his examination of how monetary policymaking arrived at IT, with particular reference to the United States (which he considers an implicit ITer). He argues that the old (1950s to 1960s) proposition that monetary policy is ineffective, because the transmission mechanism is weak and obscure and the velocity of money is endogenous, has not in fact been refuted. As the result of various experiences, central bankers and others have become convinced that monetary policy matters, and now formulate policy on that basis, but the intellectual underpinnings remain weak. In addition, he warns against multiple objectives or dual mandates for central banks, and supports more openness by central banks about what they can and cannot achieve.

The chapter by Thórarinn G. Pétursson returns to the issue of the effect of IT adoption on macroperformance, but examines it from a different perspective. He focuses on the volatility rather than the level of inflation and sets out to identify the factors responsible for countries' different rates of success in reducing inflation volatility in a sample of forty-two developed and emerging market countries. His initial cross-section work highlights the roles of the volatility of the exchange rate risk premium, the exchange rate pass-through to inflation, and monetary policy predictability. He then introduces a dummy variable for the effect of

adopting IT on inflation volatility, and it turns out to be significantly neg-
ative in a panel regression in which the three factors already mentioned
remain significant.

Andrew Filardo and Hans Genberg investigate a very different sample:
twelve Asia-Pacific countries, including both industrial and developing,
large and small, from Australia via China and Hong Kong to Indonesia,
of which six are formal ITers and the other six take inflation very seriously.
They find that the macroeconomic performance of the two groups has
been broadly similar, particularly in terms of inflation control and private
sector inflation expectations. This leads them to suggest that, in their
sample at least, there is no clear advantage for formal over informal IT:
'[T]argeting inflation is important but there are many ways to skin that
cat.' They also speculate briefly about the possibility of a central bank
having multiple objectives with state-dependent priorities.

While the macroeconomic impact of IT is fundamental, a second
major issue is that of the correct response of monetary policy to asset
prices (which is also touched upon by Roger, Schmidt-Hebbel and oth-
ers). Christopher Allsopp re-examines, and broadly reasserts, the con-
ventional majority view that policy should not respond except after a
bubble has burst. He argues that an important part of the contribution
of IT is that it simplifies the assignment problem: the control of inflation
is assigned to central banks as the single objective to be pursued with a
single appropriate instrument – the policy interest rate. Ideas of respond-
ing pre-emptively to rises in asset prices, or 'leaning against the wind',
risk diluting that clarity and losing the benefits it confers. At the same
time, he calls for more emphasis on improved financial regulation and on
understanding and dealing with the global imbalances that underlie the
'savings glut' of recent years.

Charles Goodhart, Carolina Osorio and Dimitrios Tsomocos present
an emphatically non-DSGE (dynamic stochastic general equilibrium)
model, with heterogeneous households and banks, securitisation,
endogenous default, an essential role for money, and incomplete finan-
cial markets. This allows them to analyse the impact of different policy
responses in the context of a financial crisis. The key finding is that the
policy interest rate is a superior instrument to changes in money sup-
ply. They also emphasise the need for better financial regulation, and
for house prices to be included in the price index that the central bank
targets.

George Evans and Seppo Honkapohja also deal with the issue of the
appropriate policy instrument in a crisis or liquidity trap situation, but
they model the private sector's ability to learn to make accurate expec-
tations. They analyse an infinite-horizon learning – as opposed to an

Euler equation learning – economy in which agents need to forecast variables such as output, inflation, interest rates and taxes. In their model, a large pessimistic shock to expectations can drive the economy into a highly undesirable deflation trap. Aggressive monetary easing on its own is not sufficient to rescue the economy if the expectations shock is large. However, aggressive monetary easing coupled with expansionary fiscal policy when required eliminates the possibility of a deflationary spiral and ensures global stability.

Anke Weber also uses learning models, but with a different focus, to address empirically the development of expectations in a group of EU countries. She finds that expectations can be reasonably modelled as reflecting adaptive learning behaviour, and identifies some interesting but plausible contrasts between the learning behaviour of households and expert forecasters (the former learn more slowly) and between high- and low-inflation countries (households in high-inflation countries update their information sets more frequently than those in low-inflation countries). She also finds that the inflation expectations of professional forecasters broadly converge on the ECB's definition of price stability (under but close to 2 per cent), but that this is not true of households: German households underestimate the ECB's target while Spanish households overestimate it.

The next two chapters examine professional forecasters' expectations of inflation in IT as opposed to non-IT regimes. Morris and Shin (2002) raised the possibility that increased transparency could be destabilising if forecasters put too much weight on information published by the central bank (as opposed to their private sources of information), because this makes the economy too sensitive to common forecast errors. Stephen Cecchetti and Craig Hakkio study the impact of inflation targeting on the dispersion of inflation forecasts (as collected by Consensus Economics). Broadly, they find no clear evidence that (greater transparency of policy under) IT reduces that dispersion, which means that the Morris and Shin concern is not of practical importance. Christopher Crowe focuses on individual forecasters (using the same data source). He finds that IT improves individual forecasters' forecasts, and does so by more for those with initially poorer forecasts but with no loss for those with already good forecasts. However, he also finds that forecasters' rationality may be adversely affected by IT, as they tend to overweight the central bank's published information, and this enables him to reconcile his findings with those of Cecchetti and Hakkio.

Magnus Andersson and Boris Hofmann investigate one of the most recent (and contested) innovations in IT: the publication by IT central banks of their own forecasts of the policy interest rate. It has been