



Student Paper Series

**The Politics of Targeting Regime Choice:
Has Inflation Targeting Met its Demise?**
By Yuh Yiing Loh (MPP 2014)

**THE POLITICS OF TARGETING REGIME CHOICE:
HAS INFLATION TARGETING MET ITS DEMISE?¹**

Yuh Yiing, Loh (Hertie School of Governance)²

20 December 2012

¹ Word Count: 6,077, excluding Annexes and Bibliography.

² Submitted as the final paper component of the E1108 Current Topics in International Macroeconomics course, Fall Semester 2012.

ABSTRACT

Critics argue that inflation targeting (IT) has met its demise in face of the current financial crisis. As such, price-level targeting and nominal gross domestic product (GDP) targeting have been proposed as alternatives, but to date no country has made the switch – why is this so? Existing literature tends to treat the choice of targeting regime as a function of economic theory, empirical precedents, and policy execution constraints. I find this analytical framework insufficient; otherwise, we should observe at least some countries exiting IT regimes in light of the arguments made thus far. In order to explain why governments have yet to make the switch away from IT, I propose that a fourth determinant needs to be added to the framework – politics. Based on this framework, I conclude that IT has yet to meet its demise.

JEL: *E52, E58, E61, E65*

Today, inflation stability is an important macroeconomic goal pursued by governments worldwide. Since the Reserve Bank of New Zealand Act of 1989 came into effect, nearly thirty central banks around the world have adopted inflation targeting (IT) regimes in hopes of achieving this goal.³ (Warburton and Davies, 2012) More than twenty years on and in face of the current global financial crisis, however, some critics argue that IT has not lived up to its promise. (cf. Stiglitz, 2008; Frankel, 2012)

“Today, inflation targeting is been put to the test – and it will almost certainly fail (sic)”

~ Joseph Stiglitz (2008)

Its key failure was that under IT regimes, central banks were unable to detect and control asset price inflation, as well as the build up of household and corporate debt. (cf. Frankel, 2012; Kemp, 2009) In the current global financial crisis, this significantly influenced overall inflation, which led to systematic deviations from promised inflation rates. Debate is now rife on whether Stiglitz was right in his prediction of IT’s future. Notably, the discussion seems to have intensified following Frankel’s tribute to ‘the death of inflation targeting’ in a recent weblog post. (Frankel, 2012; cf. Altig, 2010; Kemp, 2009; Sumner, 2012) The question at hand is: Is inflation targeting really dead? If it is, what targeting regime should replace it?

The possible alternatives that have been offered are price-level targeting (PLT) and nominal GDP targeting (NGDPT). Yet despite seemingly compelling arguments against maintaining IT, no IT country has made any switches to date. Why is this so? This brings us to a more fundamental question: ‘How does a country decide on its targeting regime (TR)?’

³ As of 2012, there are 27 explicit inflation-targeting regimes worldwide. Three countries (Finland, Slovakia and Spain) had originally adopted inflation targeting regimes, but have exited the regime since joining the European Union. (Hammond, 2012) See Annex A for a list of all inflation targeting countries to date.

Existing arguments in this debate for and against IT suggest that TR choice can be thought of as a function of the following three determinants: economic theory, empirical precedents, and policy execution constraints, which we illustrate as follows:

Choice of Targeting Regime = $f(\text{economics}; \text{experience}; \text{execution})$

However, monetary policy (MP) depends as much on politics as it does on considerations of economics and precedents. (cf. Alesina and Stella, 2010; Hind, 2012) Even where MP is delegated to independent central banks, politics remains inevitably intertwined with policy. (cf. Hind, 2012) For example, partisanship and government ideology have been identified as statistically significant influences on the adoption of inflation targeting. (cf. Mukherjee and Singer, 2008)

Therefore, I argue that the existing analytical framework is insufficient to explain why governments have yet to make the switch from IT to other TRs. Instead, we require a framework that includes political factors in order to analyse the present debate on inflation targeting's demise comprehensively. Thus, I propose to incorporate politics as a fourth determinant of regime choice, i.e.

Choice of Targeting Regime = $f(\text{economics}; \text{experience}; \text{execution}; \text{politics})$

Using this extended framework, I conduct case study analyses of four countries: Canada, New Zealand, United Kingdom and the United States.⁴ I conclude from these case studies that politics is indeed a fourth determinant that can explain why governments did not or have yet to make the switch to other TRs even though arguments for switching are compelling based on the 3-variable framework. In particular, even though economic theory and the experience of the current crisis suggest that IT has failed and met its demise, we find good reasons to think that governments will not be making the switch from IT to PLT or NGDPT anytime soon.

⁴ In January 2012, the Federal Open Market Committee (FOMC) announced for the first time an explicit, numerical inflation target of 2% annually. We take this as an indicator that the US has joined the league of IT regimes. (Spicer, J., 2012; Federal Reserve Bank of St. Louis, 2012)

2 THEORETICAL FRAMEWORK

In this section, I highlight arguments for and against three MP regimes (IT, PLT, NGDPT), through which we can infer a 3-variable framework of TR choice. Then, I provide arguments for the inclusion of politics into TR choice from two perspectives. First, current literature already shows that politics is an important determinant of various aspects of MP. (cf. Woolley, 1983; Alesina and Stella, 2010) Second, targeting regime choice in particular is inevitably tied to political considerations. (cf. Mukherjee and Singer, 2008) Finally, I present the proposed 4-variable framework as an extension of present theory.

2.1 THE 3-VARIABLE FRAMEWORK OF TR CHOICE

Three types of TRs will be discussed in this paper: IT, PLT and NGDPT. The latter two have been chosen based on existing debates of TR choice, as they seem to be the best alternatives feasible for central banks aside from IT. We begin by defining these regimes.

Following Svensson and Bernanke *et al*, ***inflation targeting (IT)*** is a framework for monetary policy characterised by (i) the public announcement of official quantitative targets (or target ranges) for the inflation rate over one or more time horizons, and (ii) the explicit acknowledgement that low, stable inflation targeting is MP's primary long-run goal. Among other important features of inflation are (iii) vigorous efforts to communicate with the public about the plans and objectives of the monetary authorities, (iv) mechanisms that measure the central bank's accountability for attaining those objectives. (cf. Svensson, 2007; Bernanke *et al*, 1999)

Price-level Targeting (PLT) is very similar in spirit to IT, but as its name suggests, central banks set a target for the price-level instead of inflation rate. If the target is met, the outcomes under IT and PLT are the same, i.e. inflation as measured by the Consumer Prices Index (CPI) is kept stable at the target. However, when the target is missed, the IT central bank would have to take the necessary actions to get inflation back to its target. When successful, this puts the price level on a new path parallel to but permanently below its original path. (See Figure 1) The PLT central

bank, on the other hand, would undertake policies to return the price level to the original path instead, even though doing so would require the short-term inflation rate to exceed the target, e.g. as illustrated by the line segment AB in Figure 1, until the price level has made up for its earlier shortfall. (Dolan, 2011)

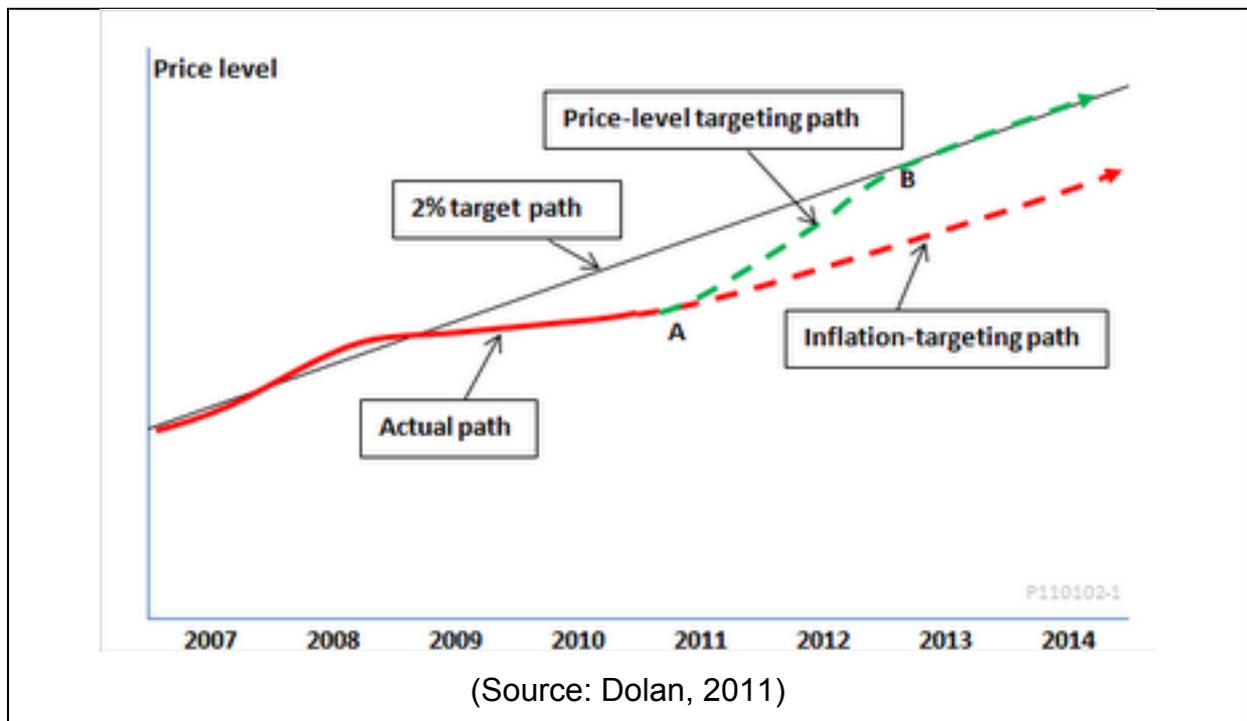


Figure 1: Difference in treatment of missed target, PLT vs. IT

Unlike IT or PLT, **Nominal GDP Targeting** involves the central bank setting a target for the level of nominal gross domestic product (hence NGDP), i.e. the level of output before accounting for inflation, which makes it a target that incorporates both goals of macroeconomic stabilisation – output and inflation. Aside from the target, central banks that adopt NGDPT follow in principle a similar policy regime as with IT and PLT.

2.1.1 ECONOMIC THEORY

Most of the arguments in favour of PLT or NGDPT as an alternative to IT are based on considerations of economic theory.

For example, PLT has been suggested as an alternative to IT because it does not 'let bygones be bygones'. As described, when the target is missed, IT will simply ignore previous missed inflation targets and aim to return current inflation to its target. In doing so, it moves away from the original price-level path – an outcome that PLT would never allow. This means that PLT will be better able to control the movement of price-levels, and in theory, providing more certainty about the long-term purchasing power of money. (Economist.com, 2010)

NGDPT has also been suggested as an alternative to IT. Its advantage relative to IT is its robustness, particularly with respect to supply shocks and terms-of-trade shock, i.e. under NGDPT central banks are able to respond to output shocks without treating them as inflation shocks. For example, if the European Central Bank had adopted an NGDP target, it could have avoided the mistake made in July 2008, when just as the economy was going into recession, it responded to a spike in world oil prices by raising interest rates to fight consumer price inflation. (Guardian.co.uk, 2012)

We can conclude that the arguments above share an underlying assumption: economic considerations should inform TR choice, i.e. if it is well grounded in economic theory, countries should switch from IT to PLT or NGDPT.

2.1.2 EMPIRICAL PRECEDENTS

Another theme that is commonly highlighted in the debate on TR choice is the availability of empirical precedents for each TR. In particular, although economic theory suggests that PLT and NGDPT is grounded in equally good, if not better economic sense as compared to IT, common arguments against the adoption of PLT or NGDPT cite the lack of empirical precedents as a deterrence from adopting either. (cf. Hendrickson, 2012)

This line of argument suggests that we can also think of TR choice as being determined by the availability of empirical precedents, i.e. precedents are a determinant of TR choice. However, those who have made empirical precedents the focus of their arguments may have been unnecessarily harsh in their critique. Given

that empirical precedent is a determinant of TR choice, current available information suggests that we should be more optimistic about switching to PLT or NGDPT.

In theory, the idea of targeting nominal GDP has existed since the 1980s, when many macroeconomists saw it as a logical solution to the difficulties of targeting money supply. (Guardian.co.uk, 2012) In practice, Drum pointed out that countries have been keeping track of nominal output for as long as they have kept track of inflation, and most central banks have also kept a close eye on the path of NGDP – either explicitly or implicitly – by putting weight on both inflation and real output in making policy decisions (e.g. Taylor rules). (Economist.com, 2011)

With respect to PLT, Mark Carney, the governor of the Bank of Canada, argued that IT fosters financial instability. In theory, a central bank that wants to control excessive borrowing will not have an incentive to raise interest rates if it pushed inflation below target. If it targeted the price level over a period of time instead, it could justify a temporary decline in that level provided it later made up the lost ground. (Economist.com, 2010) In practice, PLT has actually been implemented in Sweden, when the Riksbank adopted a price-level target in the early 1930s. Furthermore, the price-level target is not so different from the inflation target in that both would make use of headline CPI as the target measure, which makes arguments citing the lack of empirical precedents against PLT and NGDPT rather weak.

2.1.3 POLICY EXECUTION CONSIDERATIONS

Moving on, the debate about which TR to adopt (or whether to give up a TR) also commonly introduces practical policy considerations. In particular, a key argument against PLT is that its success depends on the way public expectations are formed – something that is extremely difficult for the central bank to assess. In an ideal scenario, PLT will be highly effective if the public is forward-looking, as inflation expectations would adjust more easily to the central bank's shifting target than if the

public was backward-looking.⁵ (cf. Economist.com, 2010) This may seem simple in theory, but will be extremely difficult, if not impossible, for the central bank to anticipate. A similar argument is made against NGDPT, where the target is thought to be overly complex for the public to understand in its execution. If the public is unable to grasp the policy target intuitively, it will be difficult to influence inflation expectations reliably and thus defeat the effectiveness of the regime.

However, just as arguments against the lack of empirical precedents were weak, the argument regarding policy execution constraints seems to hold little water when raised against PLT and NGDPT. In particular, there is a much more pressing policy constraint that faces IT, one that arguably justifies the risk of moving to PLT or NGDPT where other policy constraints would arise – specifically the impotence of monetary policy via controlling interest rates as nominal interest rates hit the zero lower bound in many countries.

2.1.4 CONCLUSIONS OF THE 3-VARIABLE FRAMEWORK

The arguments presented above suggest that existing theory concerning the choice of TR can be summarised as follows:

Choice of Targeting Regime = f (economics, experience, execution)

If TR choice is indeed a function of these considerations, then there appears to be a strong case for countries to exit IT regimes and to adopt PLT or NGDPT instead. Yet, as foreshadowed, this is hardly so. In fact, no IT regime appears to be anywhere near an exit from the regime despite the fervent debate that has taken place. This suggests that there is more to the choice of targeting regime than the

⁵ Research by the Bank of Canada suggested that if more than 40% of the public based their expectations on rules of thumb or past inflation, price-level targeting would lose its edge over inflation targeting. (cf. Economist.com, 2010)

aforementioned considerations. This missing determinant, as I shall propose, is politics.

2.2 POLITICS AS A DETERMINANT OF TR CHOICE

In this paper, I use 'politics' to refer a variable that summarises the effects of governments' desire for re-election, dynamics of public opinion, and the dynamics of legislative and bureaucratic behaviour. That is, politics in the context of TR choice refers to anything arising from the government or its subsidiaries that are (a) independent of the central bank and (b) has an influence on central banking. In doing so, I effectively define politics to be what Woolley termed 'Type I' politics, which are concerned with 'variable governmental' factors that are typical in studies of monetary policy.⁶ (Woolley, 1983)⁷

2.2.1 POLITICS AS A DETERMINANT OF MP

Existing literature has shown that even where MP is delegated to an independent central bank, politics continues to affect its operation. For example, Woolley presented a wide range of political factors that had been studied in relation to monetary policy and showed that although a rigorous modelling of politics and its influence on monetary policy may be complex in practice, political factors can and do affect the way monetary policy is carried out around the world. (Woolley, 1983) In addition, Duesenberry argued that, using studies of the Federal Reserve from post-war to late 20th century, central bank policy (in the United States) is indeed influenced by political considerations. (Duesenberry, 1983)

⁶ Governmental and non-governmental factors distinguish those that directly involve the legally constituted process of governing from those that, while important for governing, are characteristics of the nongovernmental organization of society. Variable and non-variable factors distinguish between rapidly and slowly changing political factors. **Variable governmental factors are thus factors that are rapidly changing and involve the legally constituted process of governing.** (Woolley, 1983) Refer to Annex B for Woolley's typology of political variables studied by students of macroeconomic policy.

⁷ This definition has been left intentionally broad, as the aim is to introduce the consideration of at least some political variables into an analysis of TR choice. As will be discussed in Section 4 and the conclusion, any further specification of this variable is outside the scope of this paper and can perhaps be taken up in further studies that try to develop a rigorous model of this framework.

2.2.2 *POLITICS AS A DETERMINANT OF TR CHOICE*

Following the thesis that politics is a determinant of monetary policy, Mukherjee and Singer (2008) studied government partisanship and adoption of IT across 78 countries, finding strong statistical support for the argument that countries are more likely to adopt IT when there is conformity of preferences for low-inflation monetary policy between the government and the central bank. This suggests that there are some political considerations at play when countries contend with the choice of TR. Given that such considerations are general and likely to exist regardless of the specific nature of the choice, it seems reasonable to conclude that political considerations would be pervasive throughout all TR choices (e.g. adoption of PLT, NGDPT, etc).

Yet, aside from Mukherjee and Singer (2008) who studied the effects of government partisanship on the likelihood of a country adopting an IT regime, it appears that none of the existing literature on IT adoption have attempted to include politics as a determinant of TR choice.⁸ This is a surprise, as the choice of targeting regime is certainly as much a political issue as any other aspect of monetary policy, given that governments and central banks have to negotiate on the issue. Therefore this paper hopes to address this gap in the literature by studying the relevance of politics as a determinant of TR choice.

2.3 THE PROPOSED 4-VARIABLE FRAMEWORK OF TARGETING REGIME CHOICE

In view of the above arguments, it seems reasonable to suppose that politics can and should be included in an analytical framework of TR choice as follows:

Choice of Targeting Regime = $f(\text{economics, experience, execution, } \underline{\text{politics}})$

⁸ In particular, countries are more likely to adopt IT when there is conformity of preferences for low-inflation monetary policy between the government and the central bank. More specifically, the combination of a right-leaning government and a central bank without bank regulatory authority is likely to be associated with the adoption of IT. (Mukherjee and Singer, 2008)

In proposing this theoretical framework, I argue that although considerations of economic theory, empirical precedents, and policy execution point favourably to a change in TR, political considerations have a significant influence over TR choice that can explain why TR change is in practice not undertaken.

3 CASE STUDIES

In this section, I present four case studies of countries' experiences with TR change, providing some background as well as outlook in the near future, i.e. for the next three to five years. I highlight in particular how politics has played a role in the debate about 'monetary policy innovation', i.e. switching TRs. In line with the final thesis that I will establish regarding the demise of inflation, I have chosen countries that have drawn some debate regarding the adoption of IT as well as the future of IT. However, the analysis is not limited to IT and its demise. Rather, the adoption of IT is also discussed where relevant as it supports the thesis that politics is a determinant of TR choice in general.

Table 1 provides a summary of facts covered in the rest of this section.

	New Zealand	United Kingdom	Canada	United States
IT adopted	1989	1992	1991	2012
Target	2%	1 – 3%	1 – 3%	2%
Target Measure	Headline CPI ⁹	Headline CPI	Headline CPI	Headline CPI
Decision Maker(s)	Minister of Finance & Governor of RBNZ	Government	Bank of Canada & Government	Federal Open Market Committee

⁹ Consumer Prices Index

Table 1: Overview of Targeting Regimes

3.1 NEW ZEALAND

Background

With the Reserve Bank of New Zealand (RBNZ) Act of 1989, New Zealand became the first IT regime in the world. At present, target inflation rate is set at an average of 1 – 3% over the medium term, using headline Consumer Prices Index (CPI) as the target measure. The target is set by agreement between the Minister of Finance and the Governor of the Reserve Bank over their term of office. The Governor is the single decision maker within the RBNZ, and is appointed by Minister of Finance with advice from the Board. (Hammond, 2012)

Since its adoption, IT appears to have been successful in stabilising inflation in New Zealand. (Brash, 2000) In particular, Figure 2 shows that New Zealand has managed to keep inflation mostly on target following the adoption of IT – a remarkable feat when one compares inflation rates post-1988 with that of the pre-1988 period.

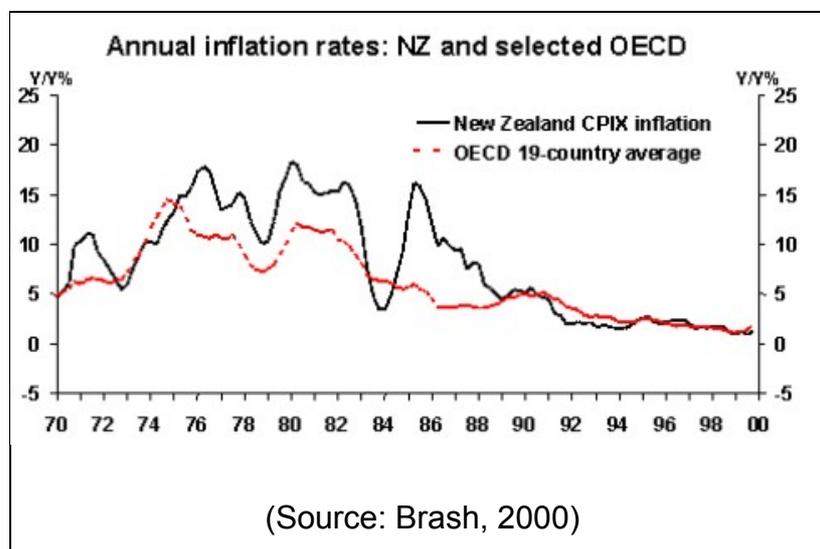


Figure 2: Annual Inflation Rates in New Zealand and Selected OECD Countries, 1970 - 2000

Future of IT

Despite its successes, there has been similar speculation amongst politicians and academics in New Zealand regarding IT's successes and failures following Frankel's weblog post speculating the 'death of inflation targeting'. (cf. Nolan, 2012; Tarrant, 2012; Parker, 2012) In particular, Labour Party member David Parker appeared to have stated in news reports that he was sympathetic to Frankel's assessment of IT's demise even in the context of New Zealand, the (rather successful) pioneer of IT. (cf. Nolan, 2012; Parker, 2012)

3.2 UNITED KINGDOM

Background

In October 1992, British newspapers reported that for the first time that monetary policy in the United Kingdom would be based on an explicit target for inflation. (Hammond, 2012) At present, a point target of 2% is set, using twelve-month increase in headline CPI as the target measure. The target is set by the government, and reaffirmed each year by the Chancellor of the Exchequer in the annual budget statement. (Hammond, 2012)

Future of IT

In mid-December 2012, future Bank of England (BoE) governor, then Bank of Canada Governor Mark Carney raised the possibility of central banks targeting nominal gross domestic product - a mix of GDP and inflation - rather than a single inflation target. (Dmitracova, O., D. Milliken and A. Mohammed, 2012) This comment was initially perceived to be a sign that the incoming BoE governor might push for the exit of the UK from IT and the adoption of NGDPT, sparking a series of news articles that predicted a 'sea-changing moment' in UK monetary policy. (Weisenthal, 2012)

However, in swift response to these predictions, Chancellor of the Exchequer George Osborne commented, '... [a]ny decisions about the (monetary policy) framework are decisions for the government, a government accountable to parliament ... If you were to move away from it, the parliament would want to be satisfied that you were getting some very significant rewards in return for moving

away from that.’ (Dmitracova, O., D. Milliken and A. Mohammed, 2012) At the time of writing, debate and speculations continue in the UK media regarding the possibility of adopting a new TR.

3.3 CANADA

Background

Canada adopted an inflation-targeting regime in February 1991, with a target of 2 per cent since 1995. (Bank of Canada, 2011) It uses headline CPI as the target measure, with core inflation as an operational guide. Both the Bank of Canada (BoC) and the government set the target jointly. (Hammond, 2012)

An interesting story surrounds Canada’s adoption of inflation targeting. In 1993, the BoC governor was John Crow, a forceful advocate of inflation targeting who wanted to keep the target inflation at below 2%, i.e. choosing a target range of 0.5% to 2.5%. Then-Finance Minister Paul Martin, on the other hand, wanted a target range of 1% to 3%. While the difference may seem small, Crow had wanted to keep moving the target even lower, which would have added further strain to an economy with deep spending cuts on the horizon. Within a matter of months, Crow’s term as governor of BoC ended, and Martin got his way with a 2% target, which remains in place today. (cf. Curry, 2011; Hammond, 2012)

Future of IT

In 2001, the BoC began to conduct extensive studies on the feasibility of adopting PLT, leading the media to speculate as to whether Canada would be the first to exit from the IT regime and to adopt PLT as has been suggested by economists throughout the late 1990s and early 2000s. (Economist.com, 2011) However, in 2011, the BoC renewed its inflation target for the next five years at 2%, sending a strong signal that its brief consideration of switching to PLT in the early 2000s is now a bygone. According to economist Christopher Ragan (2011), sticking with the status quo was only one option under debate among monetary experts in the lead-up to renewal of the Bank of Canada’s inflation-targeting mandate. In particular, Ragan (2011) also noted that the renewal of the status quo keeps in place a coherent

monetary policy regime that has served Canadians well. The next review will take place in 2015 – 16, where the question of monetary policy innovation in this respect is likely to arise again.

3.4 UNITED STATES

Background

Although little of existing academic literature has acknowledged the United States (US) as having an explicit IT regime, the consensus up till January 2012 has been that the US is an implicit inflation targeter. In the context of the current global financial crisis, America faces falling inflation and short-term interest rates at zero. This prompted Charles Evans, president of the Federal Reserve Bank of Chicago, to propose in October 2010 that the Fed adopt a temporary price-level target. (Economist.com, 2010) In principle, the goal of a temporary switch to PLT would be to raise expected inflation and lower real short-term interest rates at a time when nominal rates are stuck near zero. However, Evans also suggested that he would eventually have the Fed – which had no official inflation target then – revert to focusing on the inflation rate. (Economist.com, 2010)

On the other hand, Altig (2010) argued that the United States should simply adopt PLT and maintain a price-level target. He found Evan's proposition problematic as it might give a confusing impression that the US Federal Reserve Bank is jumping from one framework to another – a move that might compromise the Fed's hard-won credibility. Not only would a long-term PLT regime be a credible and clear policy stance, it is also 'consistent with long-standing Federal Open Market Committee behaviour'. (Altig, 2010)

Future of IT

In spite of the arguments above, in January 2012, the Federal Open Market Committee (FOMC) announced for the first time an explicit, numerical inflation target of 2% annually, using the personal consumption expenditures (PCE) price index as its target measure. In doing so, the Federal Reserve has clearly joined the league of

IT regimes around the world. (Spicer, J., 2012; Federal Reserve Bank of St. Louis, 2012)

4 DISCUSSION

To come to the conclusion that politics should be included in the framework on TR choice, we need to show that politics can affect a country's choice of TR. Quantitatively, the closest proxy that would allow us to establish this would have been to show with rigorous statistical analysis, that the variable 'politics' (which I assume to be continuous) has a statistically significant coefficient. That is, we need at least to show that politics is statistically correlated with the choice of targeting regimes.

Unfortunately, the scope of present discussion does not permit such extensive quantitative analysis, and the sample size of past monetary policy regime changes that can be tested is probably insufficient to yield robust results. Therefore, I have opted instead for a qualitative approach. I rely heavily on contextual analyses of debates occurring in the media, notably amongst economists, central bankers and political figures, to get a sense of the influence that political considerations may have had on the TR. In particular, I focus on the contextual information arising from political sources that are important to understanding why a TR was chosen, or why countries may not switch to another TR (i.e. "choosing" the status quo).

First, consider the influence that politicians have over TR choices. A quick scan at Table 1 reveals that three out of the four case studies (namely Canada, New Zealand and the UK) presented involve the government in some way as a decision maker of the inflation target. We can infer from these arrangements that PLT or NGDPT will involve similar influence of the government on TR. Given that the government as a political actor is involved in the decision-making process of target-setting, they are also highly likely to have a say in the choice of TR.

We note in the case of Canada that a political actor such as Paul Martin was able to influence the TR by making use of the mandated cooperation between the central bank and the Minister of Finance in setting the target. (cf. Curry, 2011) Turning our attention to the United Kingdom, we find that the recent debate sparked by Carney's comments on NGDPT, and in particular, Osborne's comments, suggests that TR choice is dependent on political factors as much as it is on rational argumentation. We find also in the case of New Zealand that David Parker's comments on inflation targeting show that politicians are actively involving themselves in monetary policy debates, and hope to influence actual TR choice indirectly through such statements.

Secondly, consider the influence of government's desire for re-election on the choice of TR. Given that they are able to influence TR to begin with, the desire for re-election means that TR choice will be heavily influenced by the political costs of changes to TR. Notably, any change in TR involves political costs, especially in a country where the government has an explicit role in setting the target and thus the targeting regime. For example, in order for the BoE to convince the government to change the TR, e.g. from IT to NGDPT, it will have to convince the government that the change will bring about significant successes, and is worth the cost of doing so. (Dmitracova, O., D. Milliken and A. Mohammed, 2012) Canada and New Zealand also stand as possible exemplars of this observation, as various reports on both countries have repeatedly cited the success of the present regime in controlling inflation as a reason for maintaining the status quo, even as debates and studies have been underway to examine possible alternatives. We can perhaps infer that there is an inertia politically to undertake change in these situations, especially when a switch to PLT or NGDPT might mean sustaining periods of inflation above target initially – a move that could well be perceived negatively by the public and is thus politically unpalatable.

Therefore, I conclude that empirical case studies support the extended theoretical framework proposed in Section 2, and that we should rightly think of TR choice as a function of economic theory, empirical precedents, policy execution constraints, and politics. Based on this, I argue that as far as the case studies go, IT has yet to meet

its demise. In particular, political conditions suggest that support for maintaining the status quo, i.e. IT, is high.

First, consider the case of New Zealand. Although IT appears to have served New Zealand well, it was not spared from speculation in the recent debate regarding IT's demise. It is extremely interesting that Labour party member David Parker has spoken up against inflation targeting, but given that the Labour party is at present not the ruling party, it is unlikely that they will be able to exert any force on the TR for now. That the target is set by agreement between the Minister of Finance and the Governor of the RBNZ also go towards highlighting the influence of political factors in TR choice. We can expect, that given Labour's stance, the current ruling National party is likely to maintain the status quo, i.e. IT, and exert its influence on this decision through the mandated agreement with the RBNZ.

Second, consider the case of the United Kingdom. Without belabouring the recent debate on NGDPT targeting sparked by Carney's comments, we note that although Osborne was quoted in a separate statement as saying that he remained 'open' to a switch in the UK TR a few days following the first statement, it appears from his initial remarks that political concerns could well be the barrier preventing the UK from adopting NGDP level as a target. (Kirkup, 2012)

Last, but not least, that the US has only become an inflation targeter in January 2012 suggests that inflation targeting as a regime may well survive for a while yet. In a country where academic debate on this topic is aplenty, the explicit adoption of an inflation target sends a strong signal of confidence in the TR's ability to achieve macroeconomic goals. Even though NGDPT and PLT continue to be peddled as 'better alternatives', it is likely that IT will be given a few years of grace in the US before policy actually makes a shift in any other direction.

5 CONCLUSIONS

Thus far, I have argued that the current analytical framework used in arguments for and against various TRs is insufficient. To the extent that such a framework should be able to explain how TR choice is actually made, or how variables affect TR choice, I proposed that politics be included as a fourth determinant. Using case studies, I showed qualitative support for the thesis that the political variable is indeed a determinant of TR choice, and one that can explain why despite compelling theoretical arguments for switching TRs, countries may not always make such switches.

5.1 IMPLICATIONS FOR CURRENT AND FUTURE EMPIRICAL ANALYSIS

The key takeaway from the extended theoretical framework and the case study analyses is that politics has a strong influence over a country's choice of TR. Although it may be true that in some countries (e.g. UK, US, Japan), IT as a monetary policy has failed to deliver its due, the influence of political concerns over TR choice means that a switch is unlikely in the near future. The implication of this conclusion is that although we find in many IT countries that IT has failed to rein in inflation, or that IT will be increasingly unable to do so as we approach the zero lower bound, the empirical uncertainty and complexity of introducing a never-tested TR increases the political costs of adopting a new TR significantly. Therefore, although the system may have failed, it is unlikely to be phased out soon, in stark contrast to the previous era of TR change, from monetary targeting to IT, where failure of the system in the 1970s was swiftly succeeded by TR change in the late 1980s to early 1990s.

Furthermore, even as we speak of the 'demise' of IT in the context of the present crisis, we note that IT has become the TR of choice in many emerging economies. IT's success in countries such as New Zealand and Australia have made it a framework suitable for emerging countries to emulate. It would be hasty to speak of IT's demise as a whole at a time where the world is divided into several large groups of countries at different stages of economic development. For emerging countries that are just beginning to contend with the macroeconomic goal of stabilising inflation, Lucotte found that central bank independence, policy-makers' incentives and

characteristics of the domestic political system has a great influence on the adoption and success of IT. (Lucotte, 2010) Therefore, even as IT approaches systemic failure in some developed countries, new adopters of IT may find success and refuge in its relatively parsimonious policy requirements for some time to come.

5.2 CURRENT LIMITATIONS AND FUTURE CONSIDERATIONS

In this paper, I have attempted to revise an existing analytical framework for targeting regime choice, focusing on inflation targeting and the possibility of adopting of new monetary policy regimes in light of the recent financial crisis. As far the proposed analytical framework is concerned, I have largely omitted any quantitative testing as discussed in Section 4. Relying solely on qualitative contextual analysis, I have shown that my proposed framework can be empirically supported. It would, however, be extremely interesting to conduct quantitative analyses to support the hypothesis further. In particular, to obtain a larger sample size required for quantitative analysis, we could also generalise the sample to instances of TR change to include cases of adopting inflation targeting between 1989 and 2012, as well as emerging economies that are currently considering inflation targeting.

ANNEX A: LIST OF INFLATION TARGETING COUNTRIES, 2012¹⁰

Country	Date of IT adoption	Inflation Target 2012
New Zealand	1990	1 – 3%
Canada	1991	2% ¹¹
United Kingdom	1992	2%
Sweden	1993	2%
Australia	1993	2 – 3%
Czech Republic	1997	2 ± 1%
Israel¹²	1997	1 – 3%
Poland	1998	2.5 ± 1%
Brazil	1999	4.5 ± 2%
Chile	1999	3 ± 1%
Colombia	1999	2 – 4% ¹³
South Africa	2000	3 – 6%
Thailand	2000	3 ± 1.5%
Korea	2001	3 ± 1%
Mexico	2001	3 ± 1%
Iceland	2001	2.5%
Norway	2001	2.5%
Hungary	2001	3%
Peru	2002	2 ± 1%
Philippines	2002	4 ± 1%
Guatemala	2005	4.5 ± 1%
Indonesia	2005	4.5 ± 1%
Romania	2005	2 ± 1%
Armenia	2006	4 ± 1.5%
Turkey	2006	5 ± 2%
Serbia	2006	4 ± 1.5%

¹⁰ The information contained in this table is accurate as of 14 December 2012

¹¹ Over 6 – 8 quarters, flexible

¹² Israel was informally an inflation targeter from 1992, but only formally adopted inflation targeting in 1997.

¹³ With 3% as the mid-point for legal purposes

Ghana	2007 ¹⁴	8.7 ± 2%
--------------	--------------------	----------

(Sources: Roger, 2010; Hammond, 2012)

¹⁴ Ghana was informally an inflation targeter from 2002, but only formally adopted inflation targeting in 2007

ANNEX B: WOOLLEY'S TYPOLOGY OF POLITICAL FACTORS

Governmental		Non-Governmental	
Variable	<u>Type I</u>	<u>Type II</u>	
	<ul style="list-style-type: none"> - Election Contests - Dynamics of Public Opinion - Bureaucratic Politics - Interest Group Politics 	<ul style="list-style-type: none"> - Wage Bargaining - Strike Behaviour - Business Confidence 	
Standard	<u>Type IV</u>	<u>Type III</u>	
	<ul style="list-style-type: none"> - Division of Power between Executive and Legislature - Structure and Control of Public Bureaucracy - Central Bank Independence 	<ul style="list-style-type: none"> - Degree of Unionisation - Links of Parties and Unions - Organisation of Business Sector - Financial Structure - National Preferences for Inflation/Unemployment 	

(Source: Woolley, 1983)

BIBLIOGRAPHY

- Altig, D. (2012) 'A good time for price-level targeting?' [weblog post] October 20. <http://macroblog.typepad.com/macroblog/2010/10/a-good-time-for-price-level-targeting.html>. Accessed October 31, 2012.
- Bank of Canada. (2011) Renewal of the Inflation-Control Target. http://www.bankofcanada.ca/wp-content/uploads/2011/11/background_nov11.pdf. Accessed 12 Dec 2012.
- Bernanke, B., T. Laubach, F. Mishkin, and A. Posen. (1999) 'Inflation Targeting: Lessons from the International Experience' Princeton University Press: New Jersey.
- Bloomberg.com. (2012) Contrary to Rumour, Central Banking Is A Political Act. August 30. <http://www.bloomberg.com/news/2012-08-29/contrary-to-rumor-central-banking-is-a-political-act.html>. Accessed 16 December 2012.
- Bullard, J. (2012) Inflation Targeting in the USA. *Federal Reserve Bank of St. Louis*. February 6. http://research.stlouisfed.org/econ/bullard/pdf/Bullard_Inflation_Targeting_in_the_USA_06Feb2012_final.pdf. Accessed 14 Dec 2012.
- Brash, D. T. (2000) Inflation Targeting in New Zealand, 1988 – 2000. Reserve Bank of New Zealand. 9 February. <http://www.rbnz.govt.nz/speeches/0086932.html>. Accessed on 6 December 2012.
- Curry, B. (2011) With Bank mandate up for renewal, Paul Martin recalls his own inflation battle. *The Globe and Mail*. October 20. <http://m.theglobeandmail.com/news/politics/ottawa-notebook/with-bank-mandate-up-for-renewal-paul-martin-recalls-his-own-inflation-battle/article618447/?service=mobile>. Accessed 17 December 2012.

Dittmar, R., W. T. Gavin, and F. E. Kydland. (1999) Price-Level Uncertainty and Inflation Targeting. August. Federal Reserve Bank of St. Louis.
<http://research.stlouisfed.org/publications/review/99/07/9907rd.pdf>. Accessed 15 November 2012.

Dmitracova, O., D. Milliken and A. Mohammed. (2012) Osborne - dropping boe inflation target requires big rewards. Reuters.com. December 13.
<Http://uk.reuters.com/article/2012/12/13/uk-britain-osborne-boe-idukbre8bc0wh20121213>. Accessed 14 December 2012.

Dolan, E. (2011) 'What is price-level targeting? Has its time come?' [weblog post] January 3. <http://dolanecon.blogspot.de/2011/01/what-is-price-level-targeting-has-its.html> Accessed 12 Dec 2012

Duesenberry, J. S. (1983). The Political Economy of Central Banking in the United States. *The Political Economy of Monetary Policy*.

Economywatch.com. (2010) Canada Inflation Targeting. October 14.
<http://www.economywatch.com/inflation/targeting/canada.html>. Accessed 16 December 2012.

Evans, C. (2010) 'MP in a Low-Inflation Environment: Developing a State-Contingent Price-Level Target'. [speech] Federal Reserve Bank of Chicago. October 16.
http://www.chicagofed.org/webpages/publications/speeches/2010/10_16_bost_on_speech.cfm#, Accessed December 12, 2012.

Economist.com. (2010) Economics Focus: Level Worship. *The Economist*. October 28. Accessed 5 Dec 2012. <http://www.economist.com/node/17359344>

Economist.com. (2011) Understanding NGDP Targeting. 25 October.
<http://www.economist.com/blogs/freeexchange/2011/10/monetary-policy-3?fsrc=rss>. Accessed 18 November 2012.

Frankel, J. (2012) 'The Death of Inflation Targeting', *Vox.eu*, weblog post, May 23, <http://www.voxeu.org/article/inflation-targeting-dead-long-live-nominal-gdp-targeting>. Accessed 25 October 2012.

Guardian.co.uk. (2012) Is it time for nominal GDP targets? 17 December. <http://www.guardian.co.uk/business/economics-blog/2012/dec/17/nominal-gdp-targets-bank-england>. Accessed 17 December 2012.

Hammond, G. (2012) 'State of the art of inflation targeting – 2012' Bank of England, Centre for Banking Studies. United Kingdom. <http://www.bankofengland.co.uk/education/Documents/ccbs/handbooks/pdf/ccbshb29.pdf>. Accessed 12 December 2012.

Hendrickson, J. (2012) 'MP, Level Targeting, and Political Coalitions', *The Everyday Economist*, weblog post, Aug 2, <http://everydayecon.wordpress.com/2012/08/02/monetary-policy-level-targeting-and-political-coalitions/> accessed Oct 31, 2012

Hind, D. (2012) The Politics of Central Banking. Aljazeera.com. 28 September. <http://www.aljazeera.com/indepth/opinion/2012/09/2012926103117636205.html>. Accessed 16 December 2012.

Kemp, J. (2009) 'Time to rethink inflation targeting', *Reuters' Blogs*, March 19, <http://blogs.reuters.com/great-debate/2009/03/19/time-to-rethink-inflation-targeting/>. Accessed 25 Oct 2012.

King, Mervyn (2012) Twenty Years of Inflation Targeting. [speech] http://www2.lse.ac.uk/assets/richmedia/channels/publicLecturesAndEvents/transcripts/20121009_1830_twentyYearsOfInflationTargeting_tr.pdf. Accessed 12 Dec 2012.

- Kirkup, J. (2012) George Osborne open to changing BoE inflation target. *The Telegraph*. December 13.
<http://www.telegraph.co.uk/news/politics/9742934/George-Osborne-open-to-changing-BoE-inflation-target.html>. Accessed 14 December 2012.
- Lucotte, Y. (2010) The choice of adopting inflation targeting in emerging economies: Do domestic institutions matter? Unpublished. <http://mpra.ub.uni-muenchen.de/27118/>. Accessed 18 November 2012.
- McClearn, M. (2011) Another step in the end of inflation targeting? *Canadian Business.com*. October 20. <http://www.canadianbusiness.com/blogs-and-comment/another-step-in-the-end-of-inflation-targeting/>. Accessed 17 December 2012.
- Nolan, M. (2012) Opinion: In defence of inflation targeting in NZ; Why the RBNZ is a scapegoat for the failure of government. *Interest.co.nz*. August 30. <http://www.interest.co.nz/opinion/60909/opinion-defence-inflation-targeting-nz-why-rbnz-scapegoat-failure-government>. Accessed 15 December 2012.
- Parker, D. (2012) Labour's finance spokesman David Parker talks death of inflation targeting with Daily Telegraph's Ambrose Evans-Pritchard. *Interest.co.nz*. 30 August. <http://www.interest.co.nz/opinion/60891/labours-finance-spokesman-david-parker-talks-death-inflation-targeting-daily-telegraph>. Accessed 15 December 2012.
- Ragan, C. (2011) The Roads Not taken: Why the Bank of Canada Stayed With Inflation Targeting. November 9. http://www.cdhowe.org/pdf/ebrief_125.pdf. Accessed 17 December 2012.
- Roger, S. (2010) Inflation targeting turns twenty. *Finance and Development* 47(1).
International Monetary Fund.

- <http://www.imf.org/external/pubs/ft/fandd/2010/03/roger.htm>. Accessed 14 December 2012.
- Spicer, J. (2012) In historic shift, Fed sets inflation target. Reuters.com January 25. <http://www.reuters.com/article/2012/01/25/us-usa-fed-inflation-target-idUSTRE80O25C20120125>. Accessed 14 December 2012.
- Stiglitz, J. (2008). 'The failure of inflation targeting,' Published by Project Syndicate. Available in <http://www.project-syndicate.org/commentary/stiglitz9>
- Sumner, Scott. (2011). Retargeting the Fed. *National Affairs*. Fall 2011: 9. <http://www.nationalaffairs.com/publications/detail/re-targeting-the-fed>. Accessed 4 December 2012.
- Svensson, L. E. O. (2007) Inflation Targeting. CEPS Working Paper No. 144.
- Tarrant, A. (2012) Labour's Parker to meet with world's top minds on exchange rate settings and monetary policy, including inflation targeting obit writer Frankel, Joseph Stiglitz & IMF's Blanchard. Interest.co.nz. 10 August. <http://www.interest.co.nz/news/60609/labours-parker-meet-worlds-top-minds-exchange-rate-settings-and-monetary-policy-including>. Accessed 15 December 2012.
- Walsh, C. E. (2011) 'The Future of Inflation Targeting'. *The Economic Record*. 87: September. pp 23 – 26.
- Warburton, P. and Davies, J. (2012) 'Inflation Targeting: A Child of Our Time?' February 21. <http://www.centralbanking.com/central-banking-journal/feature/2153972/inflation-targeting-child>. Accessed 12 December 2012.
- Weisenthal, J. (2012) A Sea-Changing Moment In Monetary Policy Could Arrive In The UK Sooner Than Anyone Expected. December 14.

Businessinsider.com. <http://www.businessinsider.com/uk-mark-carney-and-ngdp-targeting-2012-12#ixzz2F4YsV1CU>. Accessed 15 December 2012.

Woolley, J. T. (1983) Political Factors in Monetary Policy. July. The Political Economy of Monetary Policy: National and International Aspects Conference Series 26.