NZIER INSIGHT

57-2015

Time to reassess inflation targeting

For over a generation, inflation targeting has been successful in managing inflation without reducing economic growth. But the economic environment is changing. No longer does the Reserve Bank need to lift rates to reduce demand. Today the Reserve Bank needs to deal with supply shocks that rapidly change how New Zealand firms organise activity. Increasingly that makes inflation targeting no longer fit-for-purpose. Instead, targeting income growth – the sum of inflation and economic growth – looks the best bet to deal with new economic conditions.

Inflation targeting has worked but the economic environment is changing

In the late 1980s, many countries experienced stagflation – eye-watering inflation rates with only low to average rates of economic growth. To combat stagflation, most central banks set up frameworks to focus on price stability. New Zealand pushed harder than most and implemented a set of reforms that granted the Reserve Bank the independence to pursue inflation targeting. At the time, inflation targeting looked radical but has been successful in lowering and then keeping inflation at low levels while achieving moderate levels of economic growth.

But the global economic environment is changing. The Reserve Bank used to have to raise rates when demand for goods was sufficiently strong that it threatened to bring about higher inflation. Today, the battle is not so much demand, but negotiating a myriad of shocks to the way firms supply goods. These shocks include improvements in logistics that make it easier and faster to deliver goods to consumers, new technologies like fracking which make extracting oil cheaper, and new devices that place product information at consumers' fingertips. Globalisation and the internet have greatly increased competitive pressures across the globe. New Zealand is no exception.

These supply shocks are becoming more prevalent. That means inflation is low globally (see Figure 1) and many central banks are desperate to get interest rates low to stimulate the demand that will bring inflation back to target.[1] New Zealand is not immune from these changes. Figure 2 shows that inflation has been much lower than expected under new economic conditions.

Figure 1 Worldwide, central banks are undershooting their inflation targets

Headline and core inflation measures vs inflation targets,

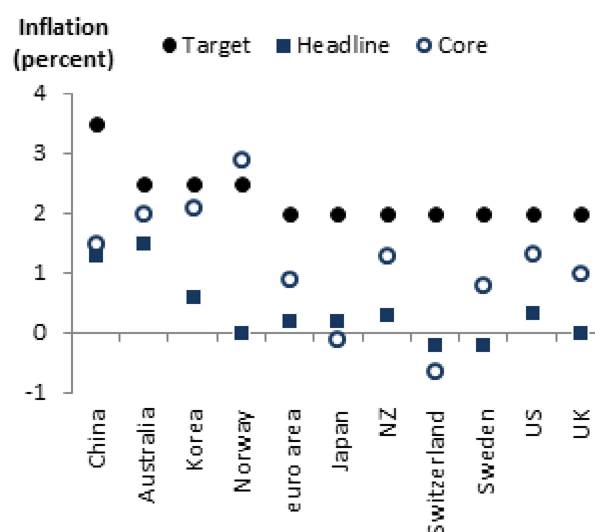
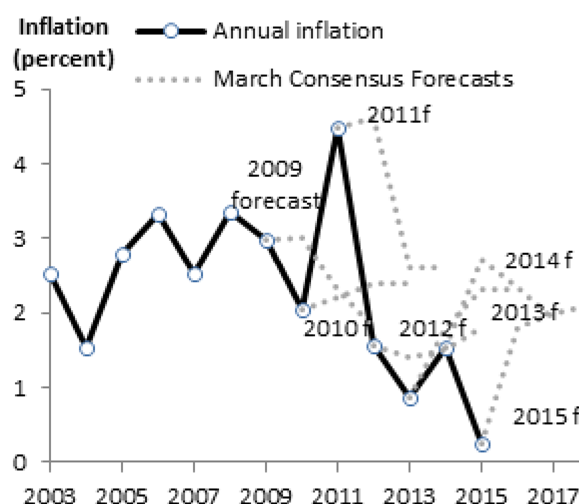


Figure 2 NZ Inflation is lower than everyone thought it would be

Annual inflation vs NZIER Consensus Forecasts



Sources: Statistics New Zealand, NZIER

[1] Ehrman (2015) describes the current period as "targeting inflation from below".

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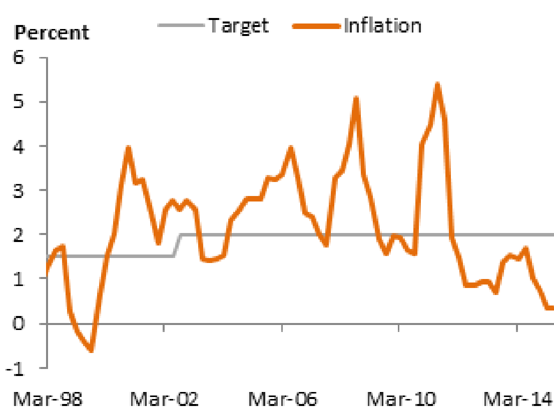
Targeting income growth deals with the new economic environment better than inflation targeting

Targeting nominal income growth, that combines real economic activity one-for-one with inflation, is sometimes advocated as a monetary policy regime but has few adopters.[2] If the Reserve Bank of New Zealand adopted a nominal income target it would set interest rates to keep the growth rate of nominal GDP close to 4 or 5 percent a year rather than targeting the rate of inflation.[3]

Better outcomes come from targeting nominal relative to targeting inflation. When the Reserve Bank targets inflation and a negative supply shock, such as a drought, hits the economy, output falls and inflation is flat so no change in interest rates is required. Under nominal income targeting, interest rates are lowered to offset the fall in output.

Figure 3 Inflation targeting says lower interest rates

Annual inflation vs Consensus Forecasts

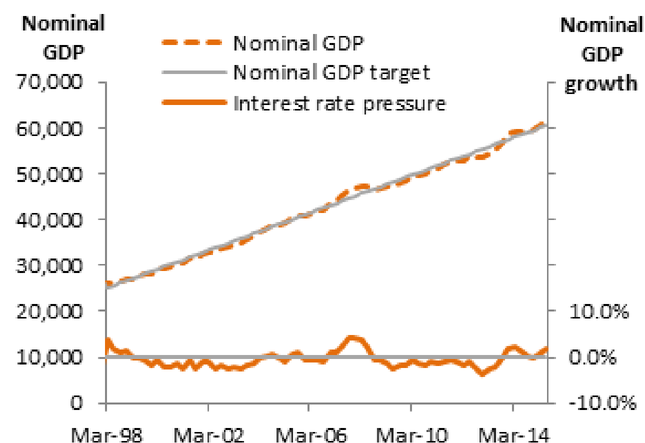


Source: Statistics New Zealand, NZIER

Materially different interest rates settings can be justified under nominal income targeting relative to inflation targeting. Figures 3 and 4 provide illustrative examples of the differences in interest rate pressure that could arise when inflation is low (like now) and nominal GDP is strong (like now). Right now the Reserve Bank of New Zealand is in a bind: leave rates on hold and miss the inflation target or lower interest rates to hit the inflation target but risk an asset price spiral.[4]

Figure 4 Targeting nominal GDP keeps interest rates flat

Nominal GDP versus target



Source: Statistics New Zealand, NZIER

High time to reassess the monetary policy framework

We could tweak the existing system…

Before leaping in to wholesale framework changes it is worth considering tweaks to the status quo that might improve how the economy deals with supply shocks while preserving inflation targeting. We see two possible tweaks that would help:

- **Taxing and contracting in real not nominal terms** – Many of the costs associated with inflation come from taxing nominal rather than real incomes. If feasible, taxing real incomes would help mitigate some of the costs and uncertainty from indexing taxation to nominal incomes. Likewise, contracting over real wages that take into account changes in inflation, rather than nominal wages that don't would reduce the costs of inflation.
- **Broadening the Policy Targets Agreement** – Rewriting the Policy Targets Agreement to place more weight on asset prices and output rather than inflation could help on the margin, allowing the Reserve Bank to focus more on output rather than inflation. But the Policy Targets Agreement has been tweaked pretty hard. Pushing further risks disconnecting with the nominal anchor, that is, the variable a central bank uses to set household and firm expectations about how where interest rates need to be.

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2 Japan has recently set a target for nominal GDP.

3 Sometimes nominal income growth targeting is criticized as being difficult to implement because GDP is subject to revisions. But nominal income growth targeting requires setting interest rates so future income growth is close to target. Interest rates would not be buffeted by revisions to GDP. Revisions to GDP also affect the output gap, a crucial driver of inflation in most Reserve Bank models. These models apply under both frameworks so from a modelling perspective revisions are equally problematic.

4 For some countries with a large amount of debt after the Global Financial Crisis, targeting nominal GDP is appealing since it allows for some inflation and nominal GDP growth that help inflate debt away, keeping nominal debt at levels that the economy can manage. Tight monetary policy that aims to keep a lid on inflation works against repaying debt. This rationale doesn't apply to New Zealand with government debt at relatively low levels.

…but benefits are likely to come from more fundamental changes

If supply shocks that lower inflation but don't affect growth keep hitting the economy there are alternatives. Rather than targeting inflation, targeting growth in nominal incomes produces good outcomes by allowing a central bank to respond more rapidly to supply shocks. Nominal GDP targeting requires raising interest rates when nominal GDP is above trend and lowering rates when nominal GDP is weak.

Many economists test how nominal inflation targeting performs relative to inflation targeting in stylised economic models. These models suggest less volatile inflation, output and interest that make people about 22 percent better off.[5] This relates to the responsiveness of monetary policy and Sumner (2014) argues that had the Federal Reserve followed a nominal GDP target, monetary policy would have responded more rapidly, mitigating the extent of the recession after the GFC.[6] Models that include asset prices are likely to exacerbate these differences.

A good monetary policy regime needs to do two things:

- Define a nominal anchor – that is, a target variable the central bank uses to align expectations of households and firms on the future path of interest rates
- Help stabilise the economy against shocks that buffet the economy.

A monetary policy regime also needs to be feasible for a central bank to implement. A central bank cannot simultaneously fix the exchange rate and move the interest rate to achieve an inflation target since capital flows will look to take advantage of interest rates differentials and shift the demand for Kiwi dollars and the exchange rate.

The Reserve Bank of New Zealand has tried basically two monetary policy regimes – fixing the exchange rate which was tried until the Kiwi was floated on 4 March, 1985 and then inflation targeting from the early 1990s. Each regime tries to minimise the impact of shocks on the economy. In the case of a fixed exchange rate, mitigating volatility by fixing export and import prices or under inflation targeting, moving interest rates in response to shocks. Similar to inflation targeting, under nominal income targeting a central bank responds to economic shocks by moving interest rates up or down.

But since nominal income targeting allows a central bank to shift interest rates when a supply shock hits the economy, nominal income targeting does a better job of stabilising the economy than inflation targeting. And nominal income targeting would deal with demand shocks equally as well as inflation targeting, for example, by reducing rates quickly during the GFC. Since demand and supply shocks are the key shocks that hit the economy, it is critical any regime can deal with these shocks. Table 1 assesses nominal income targeting inflation targeting against current and previous monetary policy regimes using our key criteria.[7]

Table 1 Nominal income targeting is more responsive to shocks that hit the economy

		Monetary policy regimes		
		Fixed exchange rate	Inflation targeting	Nominal GDP targeting
Implementation criteria	Provides an anchor?	✓	✓	✓
	Deals with demand shocks?	✗	✓	✓
	Deals with supply shocks?	✗	✗	✓

Source: NZIER

Right now the gap between inflation and nominal income growth is pretty big and growing, yielding materially different interest rates settings depending on the underlying framework. Our current inflation targeting framework says lower interest rates are required to hit a two percent target while a nominal GDP target would suggest interest rates are about right. If the current low inflation environment persists for much longer it is difficult to justify the extended period of inflation away from target as temporary factors. Either rates need to be lower or the inflation target is undermined. In contrast, nominal GDP targeting seems like an increasingly sensible framework for setting monetary policy delivering a better mix of inflation and GDP growth. At the very least, there are appealing options should inflation targeting run out of steam.

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[5] See Jensen (2002) while McCallum and Nelson (1998) find nominal income targeting dominates inflation targeting in a stylised open economy model.

[6] McCallum and Nelson (1999) and Jensen (2002) provide model-based insights and see Sumner (2014) for an overview of recent US debates.

[7] Mann and Hooper (1993) provide several examples of evaluating monetary policy regimes based on the response to demand and supply shocks.

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This Insight was written by Christina Leung and Dr Kirdan Lees at NZIER, 1 December 2015. For further information contact Kirdan at kirdan.lees@nzier.org.nz or 021 264 7336

www.nzier.org.nz | 0800 220 090 | econ@nzier.org.nz

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