The Death of Inflation?

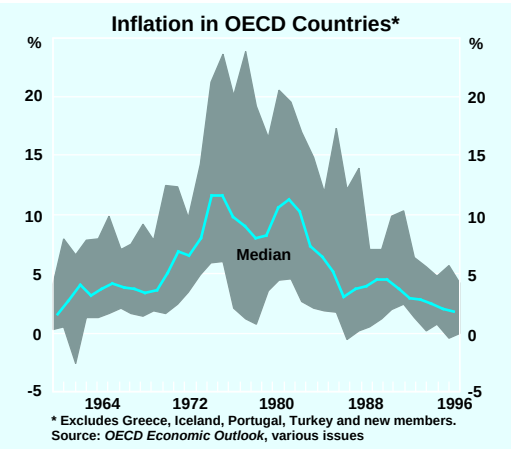
Talk by the Deputy Governor, Dr S.A. Grenville, to the AIESEC 'Forecasting the Australian Economy 1997-98' Seminar, Sydney, 28 April 1997.

For the two decades of the 1970s and 1980s, inflation was a central and continuing preoccupation of macroeconomic policy. Now, in the 1990s, the industrial world is experiencing almost universally low inflation. Not only has the OECD average fallen, but the range of inflationary experience from country to country has also narrowed sharply (Graph 1). Low inflation is now the international norm.

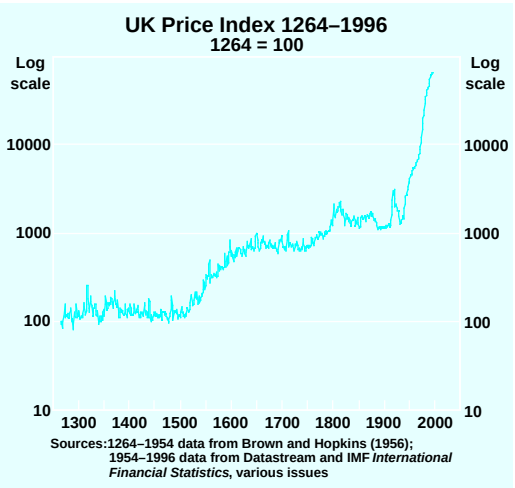
Roger Bootle, in *The Death of Inflation* (Bootle 1996), has put forward a stronger argument. Not only is inflation down, but it is 'out for the count': it has been definitively beaten. The case is argued both empirically and analytically. Graph 2 makes a compelling case that, leaving aside wars, this 20-year inflationary period is so unusual as to be regarded as an aberration. This is backed up by analytical argument:

- rapid technological change has lowered prices, undermined established market positions, and sharpened competitive forces;
- international integration and competition from the dynamic newly-industrialised countries is putting more downward pressure on prices;

Graph 1



Graph 2



- privatisation of public enterprises makes them act more competitively;
- reduction of trade union power has diminished inflationary pressures from that quarter; and
- consumers are now more price sensitive: at the same time, low inflation has made it more obvious when an individual firm attempts to raise its prices.

In short, institutional changes have occurred which will be extremely helpful for the maintenance of low inflation. Bootle argues a good case but, as I shall go on to argue, inflation has not been vanquished definitively, so that it can never recur. I am confident that inflation will stay down, but only through the continuing vigilance of the monetary authorities.

History first: there are many more episodes of inflation than those captured in the Bootle graph, if you are prepared to go back further in history and widen the geographical coverage (see Tallman 1993). If a generalisation comes out of this varied history, it is that whenever governments get into trouble fiscally, price stability is at risk. What is unusual (perhaps even unique) about the 1970s and 1980s was that this was an example of inflation which was not directly or intimately associated with fiscal problems – although budget deficits played a role, even in this period.

But let's leave history aside for the moment, and look at the analytical arguments. These can be rearranged or restated in what I hope might be a tighter framework. Look how many of the points can be directly related to enhanced *competition*:

- international integration;
- consumer sensitivity;
- more competitive labour markets; and
- privatisation.

Even the point about technology is often related to enhanced competition: the best example is the potential for better communications (e.g. via the Internet) to increase knowledge of rival suppliers, to make more people aware of alternatives and generally facilitate the widening of the market. You may now get your home loan from a financier geographically far removed from you, and buy a shirt directly from an overseas supplier.

Greater competition has had three effects:

- first, it has produced an on-going series of helpful 'once-off' price-reducing effects, which have held inflation down. The classic example here is computer prices. But there are also many examples where the arrival of competition has brought price cuts or restrained increases (Compass Airlines and, more recently, the effect of mortgage originators on house mortgage margins are two examples that spring to mind). Closer to home, at the Reserve Bank we are experiencing the benefits of greater contestability in electricity supply, resulting in a reduction of more than 40 per cent in our electricity price. Reductions in tariffs have reinforced the process by which international integration has lowered prices for Australian consumers;
- second, competition may have changed the responsiveness in some areas of the economy, so that a demand shock will not cause such a large price response. Increased exposure to foreign competition, for example, limits the ability of domestic suppliers to raise their prices when demand is strong; and
- third, competition may also have altered the *propagation* of shocks by cutting some of the links which keep price relativities (including relative wages) locked together: in particular, the less centralised wage-fixing system may have lessened the economy's proclivity to 'wage/price' spirals.

Before we look at these arguments more closely, we need to pause for a moment to say something about the reasons for inflation, and the forces which drive it.

Causes of Inflation

This is not the place to spend too much time taking apart the mechanics of inflation. It is

enough for our purpose to mention two different (even polar) views on the inflationary process. The first is that money growth causes inflation: in Milton Friedman's famous aphorism, 'inflation is always and everywhere a monetary phenomenon'. Most people would respond to this simple statement by saying: 'yes, but ...'. Henry Wallich, a long-serving member of the US Federal Reserve and hardly one who was soft on inflation or doubtful of the importance of monetary policy, responded by saying that 'inflation is a monetary phenomenon in the same way that shooting someone is a ballistic phenomenon'. Increases in money and increases in prices may well be found in close proximity, but you need to look behind the obvious proximate cause, to know *why* money grew. There is, as well, the question of direction of causation between money and prices.

We will not resolve this here. Those of you who believe that Friedman identified the single key to inflation – money – will dismiss Bootle's argument. You will say that, even when an individual price goes down, another price will go up to compensate for this, and keep the macroeconomic money/prices relationship holding. But for my part, I think the institutional framework *is* important and so we need to see how these changes in competition might have altered the price-setting process. To understand inflation, you need to look at how people set prices – the forces acting on them, and what they can get away with in terms of hiking prices (and wages). Bootle's central contribution is to remind us (if we had forgotten) that price stability is not a matter of a simple equation, but depends on the institutional structure. To understand inflation, we need to understand the context in which it occurs.

The Three Helpful Changes

First of all, let us look at the price-reducing effect of technology and competition.[1] Of course, the point to note is that these price falls are 'once-off': there is no on-going direct effect on the pace of inflation. To illustrate the point, supposing we move from pure monopoly to pure competition. This may well bring about an initial fall in prices, but it is not at all clear that this changes the subsequent rate of inflation. Similarly, once the beneficial effects of technology on computer prices are finished (if that day ever comes!), presumably computer prices will rise at much the same pace as inflation. This sort of change can perhaps best be seen as a helpful *supply-side shock*: just as the OPEC oil price increases in the 1970s were an unhelpful supply-side shock, so the beneficial supply-side shocks will be helpful but are not (in themselves) a permanent restraint on inflation (unless they are repeated again and again).

I do not want to downplay the usefulness and importance of these once-off effects. Just as the once-off OPEC effects put strains on price stability which most countries were ill-equipped and unready to handle, the beneficial effects of the more recent once-off price effects driven by technology, productivity and competition are very important.

But the second strand of the three arguments is potentially more important still, although hard to evaluate: the advent of vigorous competition may not only shift prices downwards, but it might also mean that prices will not respond so much to increases in demand. Each individual supplier will be more wary about the potential behaviour of rivals, making all of them more reluctant to put up their prices in the face of a positive demand shock. The main manifestation of this change

1. We all know of anecdotal examples of this phenomenon. But it can be identified more generally and formally. O'Regan and Wilkinson (1997) point to 'a widespread and general improvement in the international competitiveness of a large number of manufacturing industries', with 21 industries improving, five unchanged and only one declining in competitiveness.

in competitiveness is in the mindset of price setters. They have to make judgments about what they can get away with, and a sharply competitive environment is likely to change the way they think about these issues. The polar cases, to sharpen this issue, are whether people think in 'cost plus' terms when setting prices, or whether they see themselves as 'price takers'. The question to ask, then, is whether we have moved along the spectrum that lies between these two polar cases, in the direction of accepting the market-given price? If so, then this will inhibit pro-cyclical movements in profit margins, with the result that inflation is less responsive to the positive demand shocks that inevitably hit us during the course of the business cycle.[2]

One interesting example of how price-setting has changed is the strenuous efforts many businesses now make to compartmentalise their markets – particularly in those industries where marginal costs are small and fixed costs are high. Instead of treating their customers as an amorphous mass, the market is segmented and the price in each segment is tailored to the shape of the demand curve in that part of the market. Airlines are, perhaps, the classic example, where the person sitting next to you may well be paying a completely different fare. But the banks, also, provide a recent example, where new customers were differentiated from existing customers by the introduction of 'honeymoon' loans.

The third beneficial change concerns the inter-relationship between prices and the propagation of inflationary shocks. The inflationary *process* is driven, in part, by institutional and psychological links between prices (including wages): the maintenance of traditional relativities causes a shock to one price to be transmitted automatically to other prices. The point can be made briefly for those who remember the on-going concerns about 'the wage/price spiral'. Australia's institutional structure seems to still have some of these elements – particularly in the labour market. We see, at present, efforts to persuade the arbitration system to enforce the pass-on of agreements reached in part of the transport industry to the whole of the industry. In the less centralised wage structure which is developing over time, this sort of rigidity will become increasingly anachronistic. The erosion of these institutional processes – which pass wage increases from one sector to another, even when demand is not excessive – will be helpful for improving the inflationary performance. To the extent that these propagation forces are less prevalent in a more competitive world, then the costs of achieving and maintaining price stability are less. If price and wage setters feel in a position to protect their real incomes from, say, an oil price increase, then this shock will be propagated and continued until someone (ultimately, the monetary authorities) changes people's beliefs in their ability to raises prices and wages, by imposing a capacity gap on the economy. Put differently, policy cannot entirely offset a supply-side shock (in the 1970s, oil importers had to accept a fall in real income, which was the counterpart of OPEC becoming richer) but there was no need in principle for a capacity gap and unemployment to exacerbate the initial loss of income if the institutional structure had been able to encourage a quick acceptance and adaptation to the new reality. A more competitive and sensitive economy would seem to do just this.

Does this mean that the economy can grow faster in an *overall* macro sense? Probably not: overall, macro-supply constraints remain in place – you cannot just steam up demand

2. The main discipline and source of competition come from overseas, so one test here is whether domestic prices have become closer linked with – and more responsive to – international prices. When Professor Bob Gregory (1978) looked at this nearly two decades ago, he found no link: domestic producers faced with a change in import prices appeared to allow their market share to change, rather than their price. O'Regan and Wilkinson (1997) record some change in this behaviour, with the correlation between import and domestic prices being positively related to the degree of international exposure of the particular industry, with this effect becoming stronger in the more recent data. The *speed* of response of domestic prices to changes in import prices was also higher for industries with greater international exposure. This same phenomenon is apparent in import elasticities: over time, the income elasticity of imports has increased (the price elasticity probably has also, but this is less clear in the data).

without consequences. To the extent that a more supple economy achieves higher productivity, this is a 'once-off' opportunity to expand production, but productivity growth has to remain higher to allow on-going faster economic growth. Even to the extent that demand 'spills' overseas, this would sooner or later cause the exchange rate to depreciate, with inflationary consequences. But a more competitive economy discourages prices from increasing in every link of the chain: individual firms are more reluctant to raise their prices knowing that competition is waiting to take their market share away from them; workers and trade unions are more reluctant to increase wages if there is more competition in the labour market. One way of thinking about this is that it might make the economy more able to operate, without inflation, in the 'grey' area where some sectors are experiencing capacity constraints but these have not become economy-wide.

Making it Easier for Central Banks to Maintain Price Stability

So much for the argument that extra *competition* will hold down inflation: helpful, but not decisive. Just as there have been helpful institutional changes in competition, I want to go on to argue, now, that the policy framework has also changed over time, in ways which should make it easier to implement successful price stability policies. We saw how the gold standard (and, subsequently, the fixed exchange rate standard) had provided a rule which anchored prices. In fact, the story of Graph 2 can be told largely in terms of identifying those periods where the gold standard/fixed exchange rates broke down, with the resultant inflation. The nature of this discipline is well understood. An economy running too fast lost gold or foreign exchange: the discipline came either automatically (loss of gold or foreign exchange directly contracting community purchasing power) or was policy induced (by the authorities using policy to slow an economy which was losing foreign exchange reserves). By 1971 the United States had abandoned the gold standard, and this discipline had gone. This was, perhaps coincidentally, the point at which price stability was most clearly lost (it is not clear that this was the initiating factor – see Macfarlane 1997).

Why is this germane to the debate about the 'death of inflation'? If a central explanation for the 1970s and 1980s is the breakdown of the price stability anchor provided by the gold standard/fixed exchange rates, perhaps a *new* price stability rule has been found, that explains the better performance in the 1990s. What is needed is a 'nominal anchor': a rule which will trigger a tightening of monetary policy when inflation becomes a danger. Such rules were tried much earlier: in fact, just about as soon as the fixed exchange rate rule broke down, countries started to experiment with monetary growth rules. These were not up to the task. It took central banks a while to understand that they had very imprecise control over money supply, and even if they could have controlled money supply, the relationship between money and prices was sufficiently inexact to make this a poor rule. The answer, in those countries with a poor inflation history, was the use of formal inflation targets. At last count, eight countries use inflation targets as the focus for monetary policy. Its acceptance (usually backed up – as it is in Australia – by the Government) is an important element in the growing confidence that price stability will be maintained.

The old rule (gold standard/fixed exchange rates) served well for quite some time, but ultimately failed. It failed, but not because of any intrinsic fault: in 1925, restoration of the gold standard in the United Kingdom demonstrated the power of such an anchor to deflate the economy – but at what price! Similarly, the discipline of a fixed exchange rate worked until the cost became too high (as in the United Kingdom in 1992). It is worth remembering that the old rules which helped price stability for such a long period were *voluntary*: they were abandoned not by some act of God, but by the decision of people who considered that they were too costly to

maintain. Is there a lesson here for inflation targets? Perhaps. This same potential danger applies to inflation targets (even New Zealand changed its target). So we are back to a more basic question: how do we maximise the chance of maintaining the rule? Or, the obverse of the same question, how do we minimise the costs of sticking to the rule? There are two elements to this.

We have already talked about the first: a responsive, flexible economy may be better able to absorb shocks (both demand and supply) without prices rising.

The second point is about *price expectations*. Price expectations are the ultimate anchor. Price stability is easier to maintain when the community accepts that inflation will remain low and, if temporarily knocked off track, will be restored speedily.[3] Success breeds success: the more people think that the inflation objective will be achieved, the easier it is to achieve it.

One other new element which may provide some support for low inflation is the discipline provided by financial markets in a deregulated and internationally integrated economy. Financial markets in general (and bond markets in particular) are very sensitive to slippage on inflation. If market-determined interest rates rise in response, this will tend to counter any inflationary threat. To the extent that this sensitivity is reflected in downward pressure on the exchange rate, it will encourage a tightening of policy to counter the inflationary consequences – the mere *threat* of inflation can, in some circumstances, trigger a policy response. This discipline certainly exists, but its importance could easily be exaggerated. When markets are *overly* sensitive to inflation threats, policy-makers will make their own judgments on what should be done.

A more important change which took place with financial deregulation was the floating of the exchange rate. Seemingly paradoxically, this removal of the fixed-rate anchor has made it easier to insulate the economy from foreign inflationary shocks, and more able to cope with cyclical shocks – particularly those originating in fluctuations in our terms of trade.[4] We have looked at this elsewhere (see Gruen and Dwyer 1995), so all that needs to be said here is that one of the traditional inflationary shocks is somewhat more amenable in a flexible exchange rate world. But nothing is costless, and the loss of the fixed-rate anchor makes it more imperative to have another anchor for the longer-term price level – the inflation target. With the floating exchange rate and the increasing international integration, movements in the exchange rate (which sometimes reflect changing market sentiment, not based on fundamentals) can be a threat to inflation.

Let me put forward – and then reject – one more possibility that could make us more optimistic that the 1970s and 1980s were an aberration, and hence unlikely to be repeated. If it could be shown that policy mistakes were made, through simple incompetence or a misunderstanding of how inflation works, then it could be argued that we are now older and wiser, unlikely to repeat the mistakes, and inflation will stay low.

Some current authors have put quite a deal of the blame for the inflation of the 1970s and 1980s on a misunderstanding of the policy process (see De Long 1996). This is both interesting and plausible. To put the case briefly, economists are said to have put too much weight on the stability of a long-term downward-sloping Phillips curve, and assumed that the slope could be exploited consistently to achieve lower unemployment, at the expense of higher (but stable) inflation. It would be easy to exaggerate the extent of the misunderstanding of the 'model'. My guess, looking back on this experience, is that

3. It is interesting to note that during the 1950s and 1960s – usually considered to be a period of price stability – prices actually varied quite a bit, but people always expected a speedy return to low inflation.
4. The apparent paradox might be resolved this way. The fixed exchange rate provided policy discipline in the face of domestic demand shocks and limited policy from being too expansionary. But it provided no protection (or satisfactory policy response) in the face of an external shock (e.g. terms of trade or 'imported' inflation).

most policy-makers understood that there was no 'free lunch' of this nature. To the extent that mistakes were made, they were made in the course of policy debates about just how fast the economy could grow, and the mistakes were less about the fundamental nature of the model, and more about the exact parameters – just what was 'full employment', and what you could get away with in terms of making the economy run a little bit faster. If a misunderstanding of the model was the basic cause of inflation in the 1970s and 1980s, then we could indeed be confident that this problem was now solved by our superior knowledge. But even given the advantage of the historical insights we have of this period, the basic questions about the parameters still seem relevant today. We see, in the United States, a vigorous debate about just what constitutes 'full employment' (in the jargon, where the NAIRU is), and how far unemployment can be pushed before inflation will result. Of course, let us learn the lessons of history and of this particular period, but it would risk hubris to simply assume that earlier mistakes were a misunderstanding of the model, and that we are now older and wiser. The old uncertainties remain, about exactly how the economy works, what are the size of the relationships and how long are the lags. To help us through this imperfect knowledge, we need the anchor of a simple rule such as the inflation target.

Conclusion

So where does that leave us: is inflation dead? Let me quote two others who have addressed this question. First, *The Economist*: 'But fighting inflation is a never-ending task. If inflation does stay low, it will not be because of globalisation or information technology, but because of prompt action by policy-makers.' (*The Economist* 1996). Secondly, US Federal Reserve Chairman Greenspan: 'Is it possible that there is something fundamentally new about this current period that would warrant complacency? Yes, it is possible. Markets may have become more efficient, competition is more global, and information technology has doubtless enhanced the stability of business operations. But, regrettably, history is strewn with visions of such "new eras" that, in the end, have proven to be a mirage. In short, history counsels caution.' (Greenspan 1997).

Both these quotes support the view that, while a number of recent changes in the competitive environment will help keep inflation down, good monetary policy is still the key to price stability. This in turn requires a clear rule to guide and anchor policy. For us, this is the inflation target, introduced in 1993 and formalised in an exchange of letters between the Governor and the Treasurer last year. Let me try to illustrate the usefulness (and limitations) of rules with an analogy. We can probably make our roads safer by putting median strips on them to reduce the likelihood of head-on collisions. But sooner or later, the median strip itself will be seen by some people as a contributing cause of some accident or other problem. It may simply come to be seen as a nuisance or inconvenience to freedom. Just as the median strip can be built, it can be taken away. Those who do not want this to happen can help in two ways:

- by reminding people of the beneficial effects; and
- by devising ways of ensuring that the costs associated with the median strip remain low.

You can see where I am going with this argument: if we believe that inflation targets are a useful part of the effort to achieve price stability and that price stability is a desirable goal, we need to go on reminding and persuading people of the benefits; and we need to do all we can to make sure that the inflation targets themselves are not the source of costly policy mistakes.

So far, the biggest test of the Australian inflation targeting regime was in 1994/95, when the economy experienced a period of strong demand, putting upward pressure on wages. This was successfully countered by the tightening of monetary policy in the second half of 1994, which brought inflation back to well within the 2-3 per cent range. But the

most difficult test still remains ahead of us, when we will, sooner or later, face a supply-side shock. The costs of maintaining price stability will seem to be considerable and immediate, whereas the benefits will seem longer term. What can be done to help this? 'In Times of Peace, Prepare for War'. We should use the current period of price stability to establish a firm anchor of low price expectations, and build a strong perception on the part of the community that, while some variation in inflation is inevitable in the face of shocks, there will be a quick restoration of price stability.

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