Fifty Years of Monetary Policy: What Have We Learned?

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1. Introduction

Over the past 50 years, views about the role and conduct of monetary policy have evolved considerably. The development of economic ideas, the changing state of the world, and experience – at times favourable, but for a significant portion of the period under review, unfavourable – have combined to change the environment in which central banks operate. In the process, a number of basic principles for good monetary policy seem to have been reasonably settled, but one or two remain very much debated.

This paper provides an account of this evolution.[1] It starts with an overview of the central banking world in 1960, as Australia's new central bank opened for business. Section 3 reviews some of the lessons learned since then about principles for good monetary policy. Section 4 then considers future challenges for policy-makers. Section 5 draws together some brief conclusions. For local readers, we emphasise that the paper **is not intended to provide any particular message about current issues for monetary policy in Australia.**

2. Fifty Years Ago

The world of central banking 50 years ago was quite different from that of recent years. For a start, the role of monetary policy was far less prominent than it would later become. In part this was because it was constrained by the Bretton Woods exchange rate regime, in which currencies were pegged to the US dollar. For most countries, this imposed considerable discipline on monetary policy, and provided the *de facto* nominal anchor which would later, in a world of flexible exchange rates, have to be supplied by credible national commitments to price stability. The regime was supported by a system of capital controls, designed to allow some room to pursue other, domestic economic objectives. Nonetheless, for many countries, especially small ones, the system served to constrain policy choices.

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1 For a comprehensive review of the evolution of central banking see Capie, Goodhart and Schnadt (1994), Siklos (2002), Goodfriend (2007), Herrmann (2009) and Laurens, Arnone and Segalotto (2009). For recent Australian perspectives see Macfarlane (2006) and Cornish (2010).

Price stability was of course recognised as a key objective, especially among central bankers and the international institutions.[2] The German tradition gave particular emphasis to it, driven by the searing experience of hyperinflations earlier in the 20th century. But in the English-speaking world, the dominant event affecting national economic psyches was typically the deflation and mass unemployment of the 1930s. The pressure on resource availability and prices after World War II did not really shake this. The possibility that a persistent upward trend in the price level was actually becoming entrenched had not fully registered, let alone the possibility that it could become a problem in itself. So in 1960, the pursuit of full employment was in many ways the more prominent goal of public policy in much of the world. For small economies like Australia, probably the only goal which could rival full employment in the policy ordering was external sustainability.

Monetary policy, moreover, played only a supporting role in managing the macroeconomy.[3] In the context of lengthy debates over the question 'does money matter?', fiscal policy was much more prominent (Ackley 1961). Liberated by the version of Keynesian economics that was to become fashionable in the 1960s, Anglo-Saxon policy-makers started to become more ambitious in their aspirations for managing aggregate demand. The putative inflation-unemployment trade-off became more prominent in intellectual circles as a possible choice set for policy. Governments began seeking to limit shortfalls in demand more systematically, to run economies at a rapid pace more of the time. A corollary of this was that, for a time, they would give somewhat less attention to older notions of long-run budget constraints.

Central banks certainly were engaged to some extent in countercyclical monetary policies,[4] but they also were required to have a strong focus on enforcing the system of tight controls on capital markets and banks, helping manage their respective government's financing activities, and generally keeping interest rates low. Rigid restrictions and prescriptions for banking helped to maintain prudential standards, and provided a means to direct certain banking activities and sometimes a captive market for government securities.[5] This system also provided, at least

2 For instance, at an International Monetary Fund (IMF) conference in 1959, there was general concern about the adverse effects of high inflation and some agreement that monetary and fiscal policy should 'lean against the wind'. Interestingly, the very first *IMF Staff Paper* (Bernstein 1950) was focused on the problems associated with inflation, while Bernstein (1993) later recounts that he cited inflationary pressures when asked in 1946 by the Managing Director of the IMF about the most pressing post-War economic issues.

3 See Capie *et al* (1994) and Siklos (2002) for a discussion of this point.

4 Capie *et al* (1994) have a general discussion of such policies. The use of contractionary monetary policy to 'restrain inflationary tendencies' in the United States from 1956–1957 is outlined in statements to Congress by Chairman Martin (1957, 1958). When it was clear the 'downward adjustment was setting in', the Federal Reserve moved policy to a more expansionary setting (Martin 1958). Chalmers (1968) describes how, in West Germany, the Bundesbank tightened policy in order to 'check the observable acceleration in the rate of inflation' in late 1959. In a 1960 speech, the Governor of the Bank of England, Cameron Cobbold, suggested that monetary policy in 1958 and 1959 had been directed towards 'countering a mild recession', and then tightened in 1960 to combat the dangers of demand running too fast (Cobbold 1960). In the early 1970s, examples from speeches given by central bank governors to the annual meetings of the IMF show how their policies were configured to address inflation; Karl Schiller from West Germany remarked how 'strong anti-inflationary policies [have] pushed interest rates on our money and capital markets up to the highest levels in 40 years'. For a time, the then Central Bank of Ireland *Quarterly Bulletin* provided an ongoing summary of these and other key policy decisions affecting interest rates, credit and reserve requirements for a wide range of central banks.

5 Vittas *et al* (1978) provide an overview of regulation and intervention in the banking sector across Europe, Japan and the United States. For specific remarks on the United States, see Wood (2005); for the United Kingdom, see Sayers (1957); and for Canada, see Neufeld (1958). Information on Australian banking regulations is available in Grenville (1991) and Schedvin (1992).

notionally, instruments that could be adjusted in a countercyclical fashion when required – central banks influenced the quantity, price and direction of credit via reserve requirements, regulation of certain interest rates and other directives.[6] However, the use of interest rates as an instrument was limited. Credit rationing was probably the major channel of transmission for monetary policy, since political pressure was strong to keep interest rates as low as possible for key sectors, such as housing and the government itself;[7] although, towards the end of the 1960s there was an increasing willingness to allow interest rates to adjust (Capie *et al* 1994). There was also, by today's standards, little communication from central banks regarding policy initiatives.

Of course, finance was not the only tightly regulated sector. Labour and product markets were also highly regimented and occasional use was made of direct controls over wages and prices in a number of countries, often with the explicit aim of reducing inflation.[8] In many developed economies, the trend after World War II had been to extend labour market controls and regulations in one way or another, although the extent and exact nature of these varied somewhat across countries.[9] Product markets were also heavily regulated and lacked flexibility: international trade was still limited by tariffs and quotas (though there were steps under way to reduce these); substantial parts of the communications, utilities, transport and banking sectors[10] were under public control; and restrictions on entry and tight licensing requirements were pervasive across many sectors (Megginson and Netter 2001; Nicoletti and Scarpetta 2003).

This, then, was the world of 1960. Some harsh lessons of experience lay ahead. It is to these that we now turn.

3. Some Lessons from the Past 50 Years

Here we present some conclusions reached over the past 50 years, roughly grouped under five banners: the importance of monetary policy and its objectives; the importance of flexibility on the supply side; the balance between discretion and rules; principles of good institutional design; and the significance of financial system imbalances for central banks.

While these lessons are generally taken to be accepted wisdom today (though with still considerable debate on the last one), they were hardly mainstream 50 years ago. Some only

6 Wood (2005) describes the use of these instruments in the United States and the United Kingdom, Grenville (1991) does this for Australia, while Holbik (1973) describes the various methods applied by a number of central banks during this period.

7 LK O'Brien (1964), the Deputy Governor of the Bank of England, gives a feel for this view in a speech in which he mentions that the central bank was 'preoccupied … with the problems of financing the Government's new borrowing on reasonably advantageous terms' (p 28). In a similar vein, HC Coombs, the first Governor of the Reserve Bank of Australia, remarked: 'We may need to be bolder in seizing opportunities to reduce interest rates if our development is not to be hindered by excessive capital charges' (Grenville 1991, p 9).

8 For example, direct wage and price freezes implemented in the United States in 1951 to fight inflation that rose at the onset of the Korean War seemed to have worked, while the wage and price controls implemented in 1974 were broadly applauded by professional economists at the time. Numerous policies of price and wage controls were used in other developed economies, including Australia, Austria, Canada, Japan, the Netherlands, Norway and the United Kingdom. For details see Braun (1975, 1986), Rockoff (1984) and Graham and Seldon (1990).

9 For example, in the United States, regulatory changes saw the coverage of minimum wages rise from 56 per cent of workers in 1947 to 79 per cent in 1968 (Freeman, Dunlop and Schubert 1980). For an overview of similar trends in European countries, see Siebert (1997). Australia had a highly centralised labour market structure, with a quasi-judicial compulsory arbitration commission at the heart of the system (OECD 2001).

10 Public ownership of banking was a strategic policy objective in a number of countries and complemented the goals of banking regulation; see La Porta, Lopez-de-Silanes and Shleifer (2000).

became clear after previous policy approaches were found wanting, while others emerged as the structure of economies and financial systems changed. This is not to say that they were not apparent to a number of policy-makers of the time; indeed, it is easy enough to find public statements to that effect.[11] But they were not widely understood.

It is tempting to try to present each of these five sets of lessons as corresponding to a calendar decade. The flow of events and ideas is never quite that neat, however much we might like to impose such order retrospectively. Nonetheless, in what follows, these lessons are organised roughly according to the period or events that brought about their wider recognition among policy-makers and informed observers around the world.

3.1 The importance of monetary policy and its objectives for expectations – the 1960s and 1970s

By the end of the 1960s, the apparent stability of the Bretton Woods system was under serious pressure, and this would have profound implications for monetary policy. The system of fixed exchange rates provided a nominal anchor, so long as the country at the core – the United States – maintained low and stable inflation.[12] Meanwhile, fiscal policy took centre stage when it came to dampening the business cycle.

But for various reasons, which have been extensively documented,[13] the United States was not prepared to subordinate certain policy objectives to the requirements of maintaining the US dollar's purchasing power in terms either of other currencies or of gold (whose price of US$35 per ounce had been set by President Roosevelt during the Great Depression). By the early 1970s, then, the system which anchored the global price level, through a non-inflationary US monetary policy and the link of other currencies to the dollar, was on the brink of breaking down; the anchor was starting to drag.

Inflation rose gradually towards the end of the 1960s, before it increased sharply in the mid 1970s at the time of the first oil price shock (Figure 1). Through the 1960s, American policy-makers had become more confident in their ability to operate a 'high-pressure economy'[14] – to be closer to full employment, more of the time, and to avoid damaging recessions by using activist policy measures. By the end of that decade some economists were proclaiming the death of

11 For example, Wilhelm Vocke (1952), President of the Bank deutscher Länder (the precursor to the Bundesbank), expressed clear concerns about high inflation, the need for independent central banks focused on controlling inflation, and the dangers of unfettered fiscal policies. These views are perhaps not surprising given the experience of the Weimar Republic hyperinflation. Some similar points were made by William Martin, Chairman, Board of Governors of the Federal Reserve System, in his testimony to Congress in February 1959 (Martin 1959).

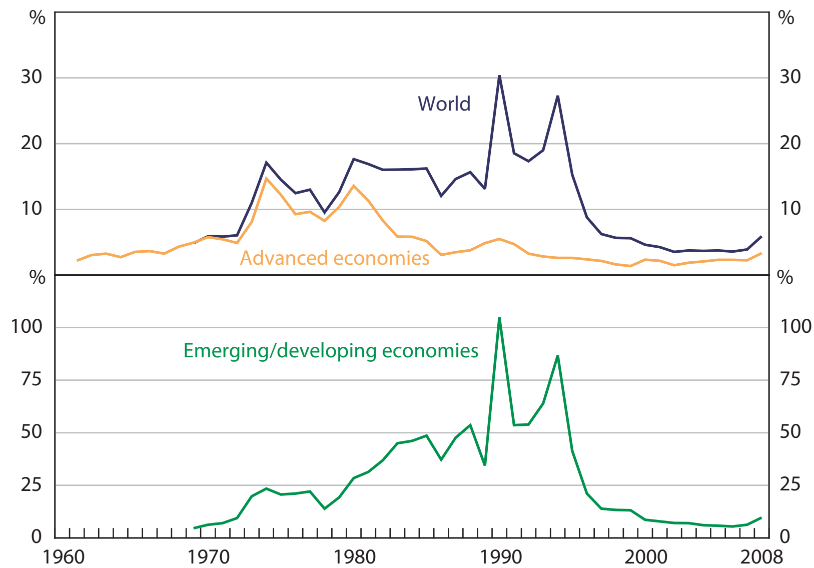
12 Participating countries were required to declare the par value of their currency to either gold or the US dollar and to maintain that value within a 1 per cent margin. Exchange rates were allowed to change to correct for persistent balance of payments disequilibria, although any change greater than 10 per cent required IMF approval. Capital controls were used by countries to limit balance of payments pressures. Quantitative restrictions were generally imposed and administrative regulations were used to increase the cost of capital flows. For more details, see Bordo (1993), while Wyplosz (2001) and the OECD (2002) provide an overview of the types of capital controls.

13 Laidler (2009) gives an overview of the tension between US domestic policy goals and the Bretton Woods system. Capie *et al* (1994) characterise US policy as pursuing both 'guns and butter'. See also Matusow (1998).

14 Okun (1973).

the business cycle,[15] while other observers were busy re-defining recession to be a period of below-trend growth, as opposed to the more usual definition (which was shortly to come back into use) of an outright decline in economic activity.

Figure 1: Annual CPI Inflation



Sources: IMF; World Bank; authors' calculations

The fact that the United States was running its economy strongly, providing a higher net supply of dollar liquidity to the rest of the world, relaxed the balance of payments constraint on other countries. This did not stop some of them getting into trouble but it generally provided a more permissive environment globally.

The build-up in inflationary pressure did not go unnoticed. There was considerable debate about the reasons for it.[16] Particularly popular in some quarters was the notion that inflation was caused in large part by 'cost-push' effects – with less blame attributable to the role of monetary policy and 'demand-pull' factors more generally. Policies geared towards addressing those pressures via controls on prices and wages attracted some prominent supporters.[17] On the other side of the debate, Friedman (1968) was a prominent advocate for the idea that inflation was

15 For example, Bronfenbrenner (1970). Also see Solomou (1998), who notes that similar claims about the death of the business cycle had been made in the 1920s.

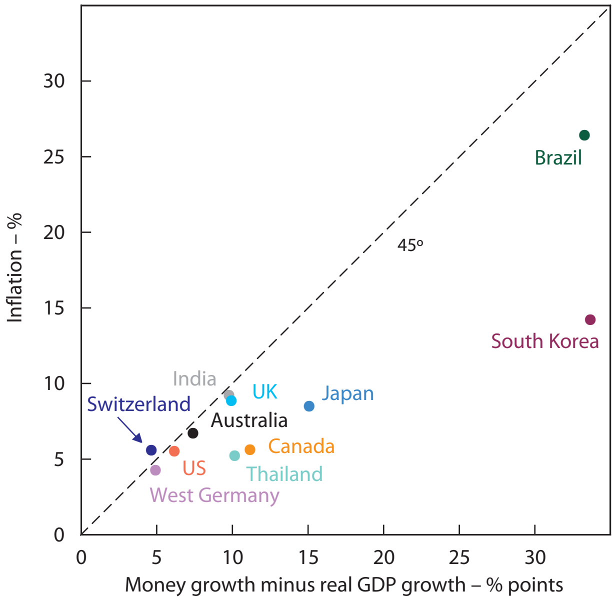
16 Okun and Perry (1978) and the papers cited therein give an interesting feel for this debate at the time and the prescribed policy responses to inflation. Meiselman and Laffer (1975) and Dawson (1992) also present the different interpretations of causes of inflation during this period.

17 In 1971, Arthur Burns, Chairman of the Federal Reserve, endorsed a price and wage review board and remarked that monetary and fiscal policies were inadequate to reduce the inflation of the late 1960s and early 1970s. Also, the Managing Director of the IMF, Pierre Paul Schweitzer, stated at the IMF annual meeting in September 1969 that:

> … incomes policy, comprising a wide range of measures that might be used to influence the movement of prices and incomes … may be particularly useful in dealing with continuing cost-push forces at a time when fiscal and monetary policies have stamped out excess demand and the economy is operating below capacity. (Central Bank of Ireland *Quarterly Bulletin*, Winter 1970, pp 36-37)

a monetary phenomenon. By the early 1970s, 'monetarism' was gaining increasing acceptance within the academic community (for example, Laidler 2009 and references therein), helped in part by the close association between inflation and money growth that was apparent in the data (Figure 2[18]; see McCandless and Weber 1995 for a more comprehensive coverage of countries over a longer sample).

Figure 2: Money Growth and Inflation
Annual average, 1966–1975



Sources: IMF; World Bank

Even if it was accepted that monetary/demand factors were ultimately the main reason for the rise in inflation, the environment was not especially conducive to a decisive central bank response. The general commitment to full employment (interpreted with increasing ambition as time went by), the prevailing wisdom in many quarters that monetary arrangements could be essentially accommodative to other concerns without there being adverse consequences, and the under-appreciation at that time of building problems on the supply side were among the constraints. The supply-side issues included the rise in inflation expectations (which would invalidate the notion that the Phillips curve offered a durable menu of choice for policy-makers), the strengthened bargaining position of labour in a world of full employment and changing political tides, the ossification of product markets under the burden of regulatory constraints, public ownership and protection, and the stronger and more organised position of the oil producers – which would be demonstrated in spectacular fashion in 1973. Particular problems

18 For all countries shown in Figure 2 except the United Kingdom and West Germany, money growth is based on money and quasi-money (M2) as defined by the World Bank. For the United Kingdom, money and quasi-money is used, as defined by the IMF. For West Germany, M1 as defined by the IMF is used. For all countries except Brazil, inflation refers to consumer price inflation; for Brazil, it is the GDP deflator. GDP and inflation series are sourced from the World Bank (except for West German inflation, which is from the IMF).

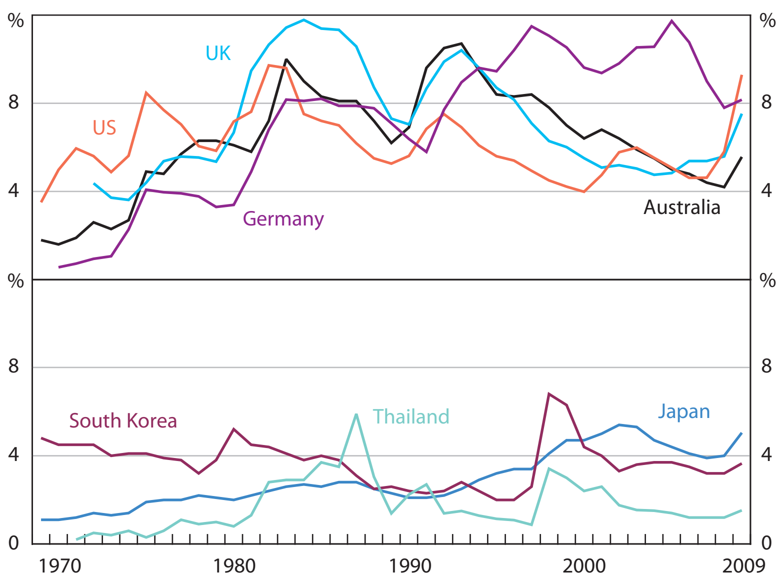
with regard to the oil price shock were both the lack of experience of such an event and uncertainty regarding its likely persistence.

A further constraint for many countries was the exchange rate regime. Disquiet had grown in countries that were receiving capital inflows as a result of expected dollar weakness and that were finding it difficult, given the obligations of the fixed exchange rate, to maintain domestic financial conditions that suited their own preferences for price stability. Measures of money growth were ballooning. After the move to flexible exchange rates eventually came, countries such as Germany and Switzerland were therefore quick to use the freedom to chart their own course. These countries would come through the 1970s with less damage to inflation performance than most, but even there inflation rose substantially between the mid 1960s and the mid 1970s, and reducing it came at considerable cost.

More generally, though, it seems that not many countries were adequately prepared to run monetary policy independently without the exchange rate anchor. To do so calls for a strong domestic framework, whose elements need to include, *inter alia*, a clear idea of monetary policy goals, adequate instruments and sufficient political scope for the decision-maker to act. These were not always in place.

Not surprisingly then, the 1970s was a particularly poor decade for macroeconomic performance, in virtually every country, on just about every metric: growth, inflation, budget positions, productivity and unemployment (Figure 3) all deteriorated.

Figure 3: Unemployment
Selected countries



Note: Prior to November1991, West German data are used for Germany

Sources: International Labour Organization; Thomson Reuters

After the dust had settled somewhat, it is fair to say that the lesson had been absorbed that 'money did matter'. At the time, the academic community saw this issue in terms of the empirical relationship between money and prices, as summarised by Friedman's claim that '… inflation is always and everywhere a monetary phenomenon …' (Friedman 1991, p 16). This took some time to become widely accepted among policy-makers (Bernanke 2003). But given the positive relationship between the growth rate of monetary aggregates and inflation across countries, as illustrated in Figure 2, and within countries in the lead-up to and during the outbreak of inflation in the 1970s, this debate moved in favour of the monetarists.[19] Even though the Lucas critique suggested that structural relationships can change under new policy regimes, the problems of instability in the demand for money were not yet obvious (Friedman 1988; Guttmann 2005) and the 'case of the missing money' (Goldfeld, Fand and Brainard 1976) was only just beginning.

Perhaps the deeper conclusion though was that monetary policy generally – the whole framework, including objectives and instruments, rather than any particular measure of money – really did matter a lot. It mattered because inflation, after all, was important: a little more inflation became quite a bit more as expectations of inflation increased and affected behaviour, and it did not give any lasting gains in employment. There was no long-run trade-off between inflation and unemployment;[20] in fact by the end of the 1970s many would be prepared to conclude that high inflation, which invariably was also volatile inflation, was detrimental to growth. Since monetary arrangements could end up contributing to instability, they could not be left just as a passive add-on, accommodating other goals, no matter how worthy those might be. A country needed a credible monetary framework and a workable set of instruments and institutional settings that would anchor inflation expectations, to provide a degree of stability that was a necessary (though not sufficient) condition for a market economy to generate sustainable growth. Moreover, the influence of monetary policy increased relative to fiscal policy as a result of the move to flexible exchange rates, a standard result of the Mundell-Fleming open economy model.

3.2 The supply side matters – 1970s onwards

The realisation that more attention had to be given to expectations was a belated recognition of the importance of the supply side. However, the supply side of the economy also mattered in other ways, and needed reform – another lesson of this period.

Those of a Keynesian persuasion had tended to argue that market failures during the Great Depression had demonstrated the weakness of free markets: the economy was not, in some circumstances, necessarily capable of adjusting automatically through price flexibility. There was a need on such occasions for effective demand to be increased by policy action to deliver a high-employment equilibrium.

19 Figure 2 presents a cross-country comparison of the relationship between money and inflation and does not account for the timing of the relationship.

20 As inflation becomes built into expectations, the Phillips curve shifts up, with unemployment returning to its natural rate over time; in the long run, unemployment is unchanged while the inflation rate is higher. Phelps (1967, 1968) and Friedman (1968) discuss this in the context of adaptive expectations while Lucas (1972) was the first to explain this idea in a model with rational expectations. See Gruen, Pagan and Thompson (1999) for a discussion of the evolution of the thinking within the RBA and evidence for Australia on the Phillips curve from the 1970s onwards. For measures of inflation expectations, see Dewald (2003), who analyses long-term bond rates for 13 major industrialised countries and finds that inflation expectations averaged across these countries trend up from around 2.5 per cent in the mid 1960s to over 10 per cent in the early 1980s.

While Keynesian demand management enjoyed a measure of success in avoiding deep, protracted downturns coming from the demand side, it could not prevent weak growth when things on the supply side started to go wrong in the mid 1970s. While perhaps not clear at the time, it now seems obvious that adverse supply developments were always going to make the choices for demand management policy more difficult in the 1970s. Moreover, in the face of shocks to relative prices, rigid labour and product markets in developed economies, combined with relatively fixed exchange rates, increased real adjustment costs. The main thing that was needed in the face of such shocks was flexibility in the economy.

In developed economies, a degree of freedom was conferred once exchange rates could move. This can be helpful in circumstances where the nature of shocks (for example, to the terms of trade) or domestic policy imperatives differ between countries.[21] Against that, exchange rate volatility can be problematic for small and very open economies to manage, so this remains a difficult issue.[22] In any event, more domestic flexibility is still desirable under any exchange rate regime.

In much of Asia, flexibility in labour markets tended to be the norm (Manning 2001). Later, and more gradually, most developed economies began a deliberate process of reform aimed at achieving more supply-side flexibility, with the Organisation for Economic Co-operation and Development (OECD) playing a key role in pursuing this agenda. Eventually, this led to significant structural reforms, removing many regulatory impediments to flexibility and competition in product and labour markets, as well as in financial markets (Conway and Nicoletti 2006). Arguably these reforms helped to make the task of monetary policy easier in at least some respects.[23]

But we will say no more about the supply-side issues here, as this is the subject of a separate paper at the Symposium. It suffices to say that monetary policy's role in supporting the supply side came to be seen as providing an environment of more stability in the general price level, allowing relative price signals to be seen more clearly. An important part of that would be anchoring inflation expectations.

3.3 Rules and discretion – the 1970s and 1980s

If it was clear by the mid 1970s that monetary policy did matter, and that inflation expectations were very important, the broader question of how to construct a framework for the conduct of monetary policy that incorporated those lessons remained.

Even if policy-makers had understood the weaknesses of the previous arrangements, the credibility of any new arrangements had to be established. Unconstrained discretion was unlikely to be fully credible; anti-inflation discipline was clearly needed.[24] It is not surprising that

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21 For a discussion of Australia's experience with flexible exchange rates see Caballero, Cowan and Kearns (2005).

22 For a discussion regarding exchange rate interventions, see Humpage (2003).

23 For example, Kent, Smith and Holloway (2005) provide some evidence of the significance of product market as well as labour market reforms in reducing output volatility.

24 The difficulty here is one of time inconsistency (Barro and Gordon 1983, for example). Policy-makers may accept the fact that there is no long-run trade-off between inflation and output/employment yet still be tempted to exploit a trade-off over the shorter term. Such a trade-off exists since some prices, wages and/or other nominal contracts are slow to adjust. If the public believe that the central bank is likely to attempt to exploit this trade-off to bolster employment, they will raise their expectations for inflation, thereby reducing the ability of policy to bring about stronger employment outcomes. Of course, this problem also makes the task of disinflation more costly than otherwise.

monetary targets became fashionable, with the Chicago school having gained the ascendancy in the debate about the importance of money and monetary policy and shown the apparent empirical reliability of the demand for money, and with a shift in the conservative direction politically after the economic problems of the 1970s.

Strictly speaking, these were in most cases not really an application of the Friedman '*k*-percent rule' which, by advocating a constant growth rate of money, was designed to avoid monetary policy itself being a source of instability. While the intellectual basis of the targets clearly rested on the quantity theory of money, and the targeting approach at least had the appearance of limiting the discretion of central banks (which may have been one of its attractions to some in the political realm, and certainly in the academic community), their actual application was very pragmatic virtually from the start. Central banks retained considerable discretion over the short term to miss targets if deemed appropriate for broader reasons (including the potential to smooth the business cycle).[25] They periodically changed the aggregates for which targets were to apply, invented new aggregates and 'de-emphasised' others. Nonetheless, the use of quantitative targets obviously owed a good deal to the idea that credibility required a shift towards the 'rule' end of the 'rule-discretion' spectrum.[26]

There was also perhaps more than a little of the 'heat shield' phenomenon articulated by Blinder (1999, p 29): money growth targets provided a rationale to move interest rates higher, ostensibly as a result of 'market' forces. In some countries, a broad money target was also partly a device to impose some discipline on government borrowing; this certainly seemed to be so in Australia.

Yet by the mid 1980s, most central banks had abandoned numerical targets – or, in the celebrated words of Gerald Bouey, the Governor of the Bank of Canada of the time, 'We did not abandon M1, M1 abandoned us'.[27] This followed significant instability in the relationship between measures of money and nominal income – as seen in both the trends and year-to-year variability in the velocity of money (Figure 4). In many cases, this was a consequence of financial innovation, often associated with deregulation. Even those countries with the strongest anti-inflationary credentials, like Switzerland and Germany, reduced the extent of their focus on monetary aggregates, in practice.

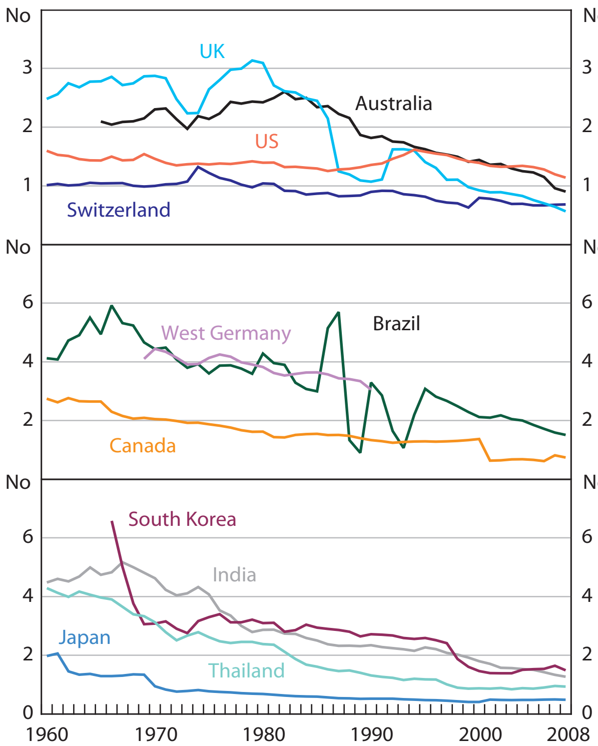
What 'rule' then could replace monetary targeting? Answers to that question differed. In the United States, the answer was fairly discretionary policy, without hard rules but nonetheless with a clearly understood policy reaction function which would contain inflation (while remaining consistent with the employment part of the Fed's 'dual mandate'). This might be described as 'rule-like behaviour' in that the simple rule for the setting of the overnight interest rate popularised by John Taylor seemed a reasonable description of the Fed's behaviour, and the response to inflation was high enough, at least by the early 1980s, to ensure that the inflation rate would be kept within reasonable bounds (Judd and Rudebusch 1998). Of course, by the mid 1980s, a considerable degree of anti-inflation credibility had been re-established as a result of the

25 Svensson (1999) argues that even the Bundesbank during the 1970s and 1980s was at times content to set aside its money growth targets, albeit in preference to inflation objectives.

26 Monetary targets also helped to promote the idea that objectives should be explicit rather than vague, thereby helping to set the scene for the introduction of inflation targets later on.

27 House of Commons Standing Committee on Finance, Trade and Economic Affairs (1983, p 2).

Figure 4: The Velocity of Money



Notes: The velocity of money is defined as nominal annual GDP divided by the money stock (as per footnote 18). For West Germany, M2 as defined by the IMF is used.

Sources: IMF; World Bank

'Volcker disinflation'. This had been achieved at significant cost. (This, incidentally, was another lesson: despite the possibility in theory of low-cost disinflation if sufficiently credible announcements could be made, no-one managed it in practice. It was always costly.[28]) Despite some critics later suggesting that US policy could be improved by an explicit inflation target, US policy would eventually receive more criticism – rightly or wrongly – on financial stability grounds than over general inflation. This is taken up later.

In Europe, the instinct for rule-like behaviour was, for historical and cultural reasons, stronger. The monetary policy framework of choice for most countries was a commitment to the European exchange rate mechanism. This meant giving up policy sovereignty in order to get the benefits of the existing credibility of the Deutsche Bundesbank, which retained its long-established 'stability culture', strong political independence, and an eye on money growth, although, as noted above, the Bundesbank itself retained a fair degree of discretion. The various incarnations

28 One later RBA Governor would say 'No country has reduced inflation by incantation' (Fraser 1993). Of course, countries with extremely high inflation can find it close to costless or even beneficial in terms of output to introduce stabilisation policies (see Dornbusch and Fischer 1986 for an account of a number of countries coming out of hyperinflations).

of the European system were subject to periodic crises, but generally continental Europe moved progressively towards integration, culminating in the single currency and the establishment of the European Central Bank (ECB) in the late 1990s. From the outset, the ECB, like the Bundesbank, had a strong anti-inflation focus and an eye on monetary quantities, in the form of its 'two-pillar' approach. More countries subsequently saw advantages in taking on euro area monetary arrangements.

In Asia, countries generally continued the practice of closely linking their exchange rates *vis-à-vis* the US dollar, accepting the cost of holding large – and after 1998, *very* large – dollar assets as part of the bargain. At least for a time, countries in Latin America also relied on fixed or closely managed exchange rates, and like a number of Asian countries in the 1990s, they too suffered from bouts of balance of payments and banking crises (Kaminsky and Reinhart 1996; Edwards 2007, 2008). Unlike the Asian financial crisis, however, Latin American crises were more likely to be associated with lax fiscal policies, which inevitably proved inconsistent with fixed exchange rate regimes, and in a number of cases led to episodes of very high inflation and even some hyperinflations.

For some other countries where the monetary quasi-rules had ultimately proved unsatisfactory, but fixed or managed exchange rate regimes were also infeasible, the search for a credible framework was arguably more difficult. Perhaps it is no surprise that in this group were to be found the pioneer inflation targeters, New Zealand and Canada, and subsequent adopters such as the United Kingdom (from late 1992), Australia (from 1993) and a number of others in later years, including in Latin America and south-east Asia.[29]

Inflation targeting is a framework of constrained discretion. It is not for everyone – very small countries which are very open often cannot accept the flexibility of the exchange rate that medium-sized, less open, economies find they can live with. But for those who can accept the set-up, the nominated target provides a useful organising device for decision-making, communication and accountability. This can help with expectations (though a period of good inflation performance is also always required to anchor expectations). Well-designed inflation targeting can also combine adequate flexibility in the short term with medium-term discipline, so offering policy-makers a reasonable chance of achieving a good combination of inflation and output variability.

Judging by behaviour, then, policy-makers took away from the experience of the 1970s and 1980s two key notions: that hard rules in most cases were not really practical,[30] but that since credibility mattered, neither was unfettered discretion. Some combination of predictable behaviour, strong commitment to long-term stability, and short-term flexibility was needed for a viable framework. Different countries have different emphases in implementation, but there is a good deal of commonality in the 'model of the world' beneath those differences.

29 Truman (2003) provides an extensive study of inflation targeting up to 2002. A more recent update is provided by Roger (2009).

30 The most successful application of a 'hard rule' may be Hong Kong's convertible currency fixed to the US dollar, backed by very large foreign exchange reserves. This has been in place for over 25 years and has withstood serious pressure on numerous occasions. The domestic flexibility of the Hong Kong economy in terms of prices and wages, which is a necessary condition for this system to be feasible, is of course matched in few other cases, if any.

However, putting all of this together – getting the right amount of 'constrained discretion' – still requires a sound organisational design for the central bank. This is another of the lessons of the period, one which came much more into focus in the 1990s.

3.4 Principles of institutional design – the 1990s

By the middle of the 1990s, monetary policy-makers in most places could claim success in reducing inflation. The Volcker period had broken serious inflation in the United States and the subsequent mild recession in the early 1990s saw it decline further. Europe was able to return to its traditional position of very low inflation once the re-unification of Germany had run its course, and laggard countries (including Australia) had finally reduced inflation.

This was all at considerable cost, however. For the benefits of price stability to be enjoyed with a full recovery of economic activity, a way of anchoring expectations was needed, which could also, in time, give central banks a measure of short-term flexibility in occasional efforts to lessen the severity of downturns. Statements of intent or formal targets can be helpful but an emerging literature focused on the incentives facing central banks to renege on such promises, which raised the question of how those incentives might be changed. The idea had also emerged from the 1970s that central banks which were most independent of the day-to-day political process seemed to be associated with better inflation performance.

In recognition of these sorts of factors, the 1990s saw quite a pronounced focus on design issues. Some of the more exotic ideas were never implemented in practice and indeed the precise formulations have been tailored to country-specific factors.[31] However, some important principles have come to be generally accepted.

Perhaps the most important principle is that a central bank should be independent, with a mandate to pursue low and stable inflation and the ability to set instruments of its choosing without outside interference. There was considerably more emphasis on this by the end of the 1990s, though with the objectives of policy usually still set by the legislature or executive branch.

Of course, a key precondition for independence is that public financing is placed on a sound footing, thereby removing any temptation for money-financed deficits. This can be reinforced by statutory means, by restricting the ability of the government to use the central bank to finance expenditure, or by granting the central bank some measure of legal independence, which in turn indirectly imposes a degree of discipline on fiscal authorities.[32] The task of monetary policy is certainly made easier if governments are willing and able to seek finance from the private sector on commercial terms in the market place.

Ultimately, independence requires widespread public acceptance of the objectives of low and stable inflation and of the central bank's operational independence. Hence independence comes

31 Laurens *et al* (2009) provide a comprehensive review of relevant literature as well as a quantitative cross-country assessment of the different aspects of institutional design for central banks, such as independence, transparency and accountability.

32 On this latter point, Germany's experience is relevant (see Vocke 1952, for example). More broadly, Laurens *et al* (2009) identify legal approaches to limiting central bank involvement in public financing – in particular, restricting the central bank from lending to the government but, if needed, only at market rates – and label this as a key principle for the governance of central banks. Cukierman (2009) provides an overview of the means by which countries have established central bank independence, while Capie *et al* (1994) discuss the relationships between central banks and fiscal authorities across a broad sample of countries.

with accountability, and a higher requirement for transparency in the form of published reports and analysis, open Parliamentary scrutiny, publication of minutes of meetings and so on.

As institutions that had historically emphasised secrecy, central banks in some cases probably found this initially somewhat confronting. Disclosure cuts both ways, however, and in some respects is advantageous to the central bank. Certainly its opinions and decisions are known with much greater clarity – including when they turn out to be wrong. This concentrates the mind. Clarity also aids the conduct of policy, and not only through the conditioning of expectations. It reduces the opportunity for governments to put behind-the-scenes pressure on monetary policy decisions and makes more explicit where the impacts of other policies are making the job of monetary policy more difficult.

A further area of clarity by the 1990s was over the question of what the monetary policy instrument really was. Academic tradition held to the notion that some monetary quantity, exogenously set by the central bank, was the policy instrument. The transmission mechanism was typically explained in terms of money multipliers and broader money concepts, with interest rates endogenously adjusting. In fact, what policy-makers actually did was to set the price of very short-term borrowing, with the quantity of central bank money accommodating that operational objective in the short term – but in the heyday of monetary targets it was unacceptable to admit to that in polite conversation. However, by the early 1990s, most central banks had openly embraced the overnight interest rate as the standard instrument of choice. Among other things, this had the benefit of tight control and provided a means to clearly communicate the stance of policy.[33] It also helped central banks to clearly distinguish between the instrument, intermediate or indicator variables, and the final objectives.

3.5 Financial stability is difficult to maintain – the 1980s, 1990s and 2000s

For some time after World War II, concerns about financial system stability tended to be in the background in developed economies. There were periodic crises in the 1960s and 1970s, but these generally could be dealt with by standard policy tools. Given the regulatory regimes in place in most economies, and the restrictions on capital flows across borders – all responses, one way or another, to the events of the 1930s – this is not altogether surprising. From an international perspective, balance of payments crises, usually associated with macroeconomic factors in the context of fixed exchange rates, tended to be of greater concern. In some cases these involved banking crises, though the origins of those events were closely intertwined with the macroeconomic and exchange rate environment of the countries concerned.

However, this state of the world was never likely to be permanent. The attempt to control financial systems through extensive regulation had its own problems. Apart from potential dead-weight losses associated with regulation, there was the associated decline in financial dynamism in the regulated sector and a consequent incentive for growth of the unregulated sector. Domestically, non-bank financial institutions tended to become bigger; internationally, the euro markets

33 Prior to this, central banks tended not to publicise changes in the overnight cash rate; colloquially the practice of unannounced policy initiatives in this regard was known as 'snugging'. Such behaviour generated public confusion at times (for an example of this in Australia, see Bell 2004).

became larger. The unregulated sector, in some cases, became large enough to pose significant risks to the total system, and in any event the regulated sector could not easily sit by and see growth opportunities go to unregulated competitors. That is why, in Australia at least, banks were one of the very few industries to volunteer for deregulation; in contrast, in most industries, regulation (at least of that era) typically favoured the incumbents and regulatory reform had to be achieved against their wishes.

There was also a global philosophical shift away from state intervention in economies, which gathered momentum from the second half of the 1970s. With all those factors, it is hardly surprising that financial liberalisation came on to the agenda.

In a number of countries, including Australia, Japan and in Scandinavia to name a few, the financial deregulation of the 1980s appeared to be associated with a degree of subsequent instability. This might be seen as a problem of transition from one state of the world to another – perhaps once things had settled, an efficient financial sector with strong prudential oversight, combined with sound macroeconomic policy frameworks, would play its part in fostering economic growth and stability.

It is probably as well to record, in the current climate, that substantial efficiency gains were enjoyed in many cases. Yet financial crises continued to occur. Contrary to what we may have hoped a decade or two ago, it cannot be assumed that an environment of macroeconomic stability will obviate financial instability; if anything, an argument can be made that the 'Great Moderation' encouraged, in some respects, the risk-taking behaviour that helped to visit extreme instability on many North Atlantic countries in the past couple of years. In fact, it may be unrealistic to think that the financial system will ever settle into a steady state, since innovations, including new types of financial institutions and new ways to take on risks, will probably continue to be the norm.

Again, it is not as though policy-makers had failed to notice the potential tensions. The publication of 'financial stability reports', parallel to, but separate from documents covering the general macroeconomic situation, began in the mid 1990s with the Bank of England's *Financial Stability Review*. This set a trend that many others followed. Even a fairly casual reading of many of those documents, as well as numerous speeches of central bankers, bank supervisors and others, shows that many observers conveyed increasing unease and concern about developments ahead of the US sub-prime crisis which broke in 2007. The question is what can be done about a situation in which financial system imbalances can emerge even when monetary policy settings appear to be appropriate according to standard measures of macroeconomic performance, such as inflation of the prices of goods and services.

The issue is often presented as the question of what, if anything, monetary policy should do in response to significant changes in asset prices. Some writers have tended to frame the debate around the question: should monetary policy try to 'burst bubbles'?[34]

In some respects, this use of language is unfortunate because it tends to divert attention to questions of whether we can recognise bubbles in a timely way (or even the prior question of whether bubbles can actually exist). In fact the issue is not 'bubbles', or even asset prices

34 See Cecchetti (2006) for a review of the relevant literature as it stood prior to the recent crisis.

per se. The issue is the potential for damaging financial instability when an economic expansion is accompanied by a cocktail of rising asset values, rising leverage and declining lending standards. Add substantial liberalisation, deregulation and/or financial innovation and the risks get larger again, given the potential vulnerability of new systems/products/institutions that are as yet untested by a period of economic weakness.

In the debate about what pre-emptive monetary policy response may be appropriate to try to avoid such circumstances, the arguments are by now fairly well rehearsed. If a credit-financed boom is occurring and the likelihood of a subsequent bust poses the risk of a serious medium-term downturn in the economy, some argue that the best approach is to run monetary policy tighter than otherwise in the boom phase, in order to forestall a bigger downturn later. In this view, the cost of an asset price and credit collapse is potentially so large that it must be worth paying *some* short-term cost in lost economic activity to avoid or at least contain it. At least some proponents of this view believe that existing frameworks need not be abandoned, merely augmented and interpreted a little more flexibly, over a longer horizon, to take account of cycles in asset prices and credit (Bean 2003, 2004), though there are others who argue for an aggressive policy with a view to ending the boom: there are various degrees of 'leaning against the wind'.[35]

The counter-arguments are essentially that:

- asset price changes may be fundamentally based and higher leverage sustainable, in which case policy should not resist them;
- even if an asset price and credit boom is thought with some confidence to be not well based (a 'bubble'), countering it effectively with monetary policy may take a very aggressive use of the instrument and therefore the cost to the other, non-bubble sectors of the economy will be too high;
- the use of monetary policy for this purpose is very hard to explain, given central banks' current mandates, if ordinary CPI inflation is not excessive and other policies could be better used to target asset price and credit build-ups;
- by trying to end an asset price boom late in the piece, tighter monetary policy might actually make the ensuing downturn deeper rather than shallower; and therefore
- it is better to leave asset prices and credit alone, and to continue to focus on demand and prices, including of course any expansionary or contractionary macroeconomic impacts of the asset price cycle. Given the usual asymmetry of these cycles, this mainly amounts to 'cleaning up' the fall-out after the boom has collapsed.

35 Borio and White (2004) describe the notion of 'leaning against' asset prices, while Bordo and Jeanne (2002) discuss the circumstances in which some pre-emptive policy may be warranted in response to rapid asset price appreciation. (See Bernanke and Gertler 2000 and Borio and Lowe 2002 for further discussion.) There are few if any examples though of practical experience of such policies. The Australian experience with house prices between 2002 and 2004 is quoted by both proponents and opponents of responding to house prices. It was certainly an example of a case in which the central bank clearly articulated its views, in a series of speeches and other official communications, that prevailing *growth rates* of house prices and housing credit were unsustainable and potentially a danger to financial stability. There was a modest tightening in monetary policy – which was justified on the basis of general macroeconomic grounds, but also highlighted the rapid growth of household credit – as well as a tightening of some relevant policies by the regulatory and tax authorities. There followed a relatively smooth, though significant softening in the housing market, with nominal price falls in many parts of the country (Bloxham, Kent and Robson 2010). The Swedish experience around 2005 is another example (Nyberg 2005).

Until recently, the 'clean up after' view was in the ascendancy. In the earlier rounds of debate around the turn of the century, the 'leaning against the wind' argument did not get enough traction – probably because growth in the United States was fairly easily restarted after the shallow recession of 2001 that followed the 'dot-com' bust.

While it may sometimes be possible for policy-makers to achieve this benign outcome, if asset price falls in the presence of substantial leverage lead to the failure of financial institutions, a freezing-up of financial markets and a substantial loss of confidence in the financial system, it is much more likely that the standard monetary policy tool, the overnight interest rate, could become ineffective due to the zero lower bound. Once thought to be a problem isolated to Japan, this is now seen to be a more common affliction. In other words, cleaning up the mess afterwards is very difficult if the mess is too big for the tools at hand. So debate on these issues has been rejoined. Finding a consensus on this issue is one of the major challenges for the period ahead, to which we now turn.

4. Challenges for the Next Decade or so

There are many ongoing debates about institutional design and optimal monetary policy frameworks.[36] But there are two quite pressing issues which, in our view, are likely to demand attention in the period ahead.

The first is the problem of how to best ensure financial stability, and what role monetary policy should play in this regard. The second issue – born out of the response to the crisis, particularly of fiscal policy – is the interaction between fiscal and monetary policies.

4.1 Financial imbalances and monetary policy

As outlined above, there remains considerable debate about the role of monetary policy in responding to risks to financial stability. A degree of caution is certainly warranted – monetary policy cannot resolve every problem and central banks must always be wary of burdening policy with multiple goals (especially given the limited instruments at hand).

The real question, however, is simply whether monetary policy can plausibly escape any responsibility for a significant rise in financial system risk associated with large increases in asset prices and credit, and reduced lending standards. After all, the price of short-term borrowing is controlled by the central bank. Granted, in many countries long-term borrowing costs are more important for end-borrowers, but the short rate may still be an important driver of the behaviour of financial intermediaries and other actors in markets (Adrian and Shin 2008). In that sense,

36 For example, there are questions about the appropriate degree of flexibility in monetary policy frameworks – such as the optimal horizon for hitting an inflation target. There is a set of questions surrounding whether, and if so how, policy-makers should reveal the expected future path of the interest rate instrument, and whether there are occasions when it might be optimal to make commitments regarding such a path. Other topics of interest are: how to deal with uncertainty that we face across many dimensions; how to characterise risk and preferences regarding risk; and whether robust policy rules can be formulated to help deal with uncertainty. On institutional design, there are many questions about the details of central bank governance, and the extent and nature of communication.

monetary policy does have a role in conditioning the environment under which asset and credit booms occur.[37]

Many of the arguments against responding to financial imbalances – that it is difficult to know if the growth of asset prices, credit and risk-taking have been excessive,[38] that the responsiveness of these developments to monetary policy changes is uncertain and may be small, and that policy responses would be hard to explain – are not that different from the difficulties monetary policy routinely faces in judging the risks to inflation and output.

It is undoubtedly desirable to have other tools with which to respond to excessive risk-taking and rapid credit growth – the much touted 'macro-prudential' policies. But people are sometimes vague about what these tools will be, and more importantly, often unclear about how they will be effectively applied.[39] To the extent that there are specific proposals – for countercyclical capital requirements for example – all the same issues of rules versus discretion, judgment of when to make discretionary changes and of explanation, will come up as for monetary policy changes. Moreover, the ongoing limitations of regulatory policy remain, not least: the potential for credit to be provided outside of the regulatory net; and the difficulties for supervisors of responding quickly enough to financial innovations that allow for leverage in untested and complex ways to build up within the net.

So while it is important for the development of these tools to continue, we need to be realistic about how quickly this can be achieved and how long it will take to gain experience in using them. In the end, of course, if the root of the problem is simply that interest rates are too low, experience suggests that efforts to handle the problem by regulations aimed at constraining balance sheet growth will not work for long.

In our view, probably the most compelling argument against a monetary policy response in the face of asset and credit booms is the possibility that the dynamics of these episodes are simply so unstable that action against financial imbalances *late in the cycle*, rather than lessening the

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37 There may be something of an analytical impediment here. The conventional macroeconomic analysis takes place, roughly speaking, in a Phillips curve/IS-LM setting. While very useful, much more work is required to adequately capture the role of the financial sector in this framework. The financial sector itself may be a source of shocks to the economy, not just a passive part of the structure accommodating the needs of commerce. In addition, if, as suggested in some recent literature, the financial sector's risk-taking behaviour is affected by the level of short-term interest rates, then the financial sector's propensity to be a source of shocks is a function of, among other things, the setting of monetary policy. If so, then the debate about appropriate responses to asset price and credit developments is often conducted on rather narrow foundations (although we note that of late there has been a resurgence of effort to develop models to address these issues).

38 This view was expressed eloquently by Cecchetti, Genberg and Wadhwani (2003, p 441):

> … we are not persuaded that one should ignore asset price misalignments simply because they are difficult to measure … If central bankers threw out all data that was poorly measured, there would be little information left on which to base their decisions.

For similar arguments see also Cecchetti *et al* (2000) and Bordo and Jeanne (2002).

39 Obviously, where it makes sense, the scope, nature of, and compliance with regulations for financial institutions and markets need to be improved (although care needs to be taken not to merely add to regulatory burdens). It also makes sense to attempt to address underlying distortions that may encourage over-investment, speculation and excessive lending in some sectors. However, it is unrealistic to think that these sorts of changes will eliminate cycles in risk-taking and finance, and so it is worth focusing attention on the potential for cyclical policies.

extent of the ensuing downturn, will actually make it worse.[40] This is a sobering argument for care once a boom has worked up a head of steam. However, it also amounts to an argument to avoid having the boom get to that point and to err on the side, much earlier in the process, of not keeping interest rates unusually low. The potential instability of a well-developed boom means that for policy-makers, the least-harm policy is to make sure that their settings are not inadvertently fuelling the build-up.

It is unlikely that we will ever overcome the problems of uncertainty to a degree that warrants aggressive 'popping' of asset price bubbles. But, to repeat, couching the debate in those terms is potentially misleading and quite unhelpful. The problem is not one of asset prices *per se*: it is one of risks and imbalances building in the financial system, as often indicated by a *combination* of rapidly rising asset prices and credit, and falling lending standards. In any event, there is a large distance on the spectrum between passively accepting asset and credit developments and aggressively seeking to reverse them. Even with the development of other tools, it is unlikely to be credible for central banks not to move, in the next decade, at least somewhat in the 'responsive' direction.

4.2 The role of fiscal and monetary policies

By the end of the 1990s, monetary policy had tended to become the main tool of countercyclical policy in many countries. The arguments for why fiscal policy may not be well suited to managing normal business cycle fluctuations are well known: it can take some time for fiscal policy to be enacted and implemented, at which point the circumstances that warranted the fiscal response may have subsided; it can be (politically) difficult to remove certain discretionary measures; and fiscal policy can introduce distortions that might be counterproductive. In addition, the build-up of public debt in some countries has led to a greater focus on long-term fiscal sustainability.

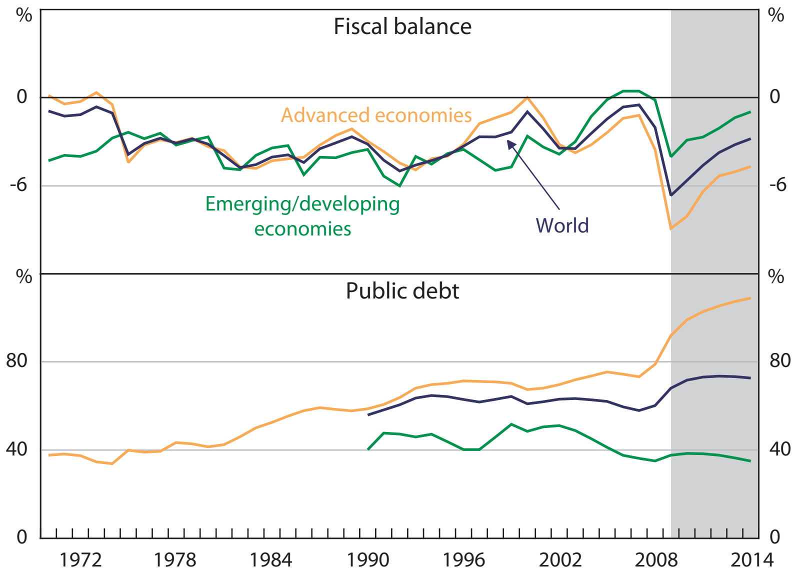
So by the 1990s, fiscal policy in major countries had become less concerned with stabilisation of the economy. More attention was being given to improving microeconomic efficiency and, more recently, to fiscal challenges that are expected to result from demographic change.

But the recent crisis marked a shift to fiscal activism. Following the collapse of Lehman Brothers in September 2008, governments around the world responded with one of the largest peacetime fiscal expansions in history, much of which was of a discretionary nature (Figure 5). In doing so, countries were following the strong advice of the IMF, which found itself, unusually, urging substantial, coordinated, discretionary fiscal expansion.

This is understandable in the context of a very deep recession in major countries, associated with a set of concerns last seen in the 1930s. A large-scale deleveraging, with weakened banks and a massive shock to confidence which saw a dramatic slump in the demand for durable goods, meant that in the countries most adversely affected, the conventional response of lowering

40 Gruen, Plumb and Stone (2003) make this point in discussing asset price imbalances. They go so far as to argue that there may be a case to ease policy in anticipation of an imminent bursting of an asset price bubble, given the lags with which policy affects activity. However, this may simply be a case of 'adding fuel to the fire'. If asset prices and credit have been growing rapidly for some time, policies that enable a continuation of credit on relatively easy (or even easier) terms may make financial imbalances worse. The problem is that at this late stage there is already an excess of finance and investment being directed to the 'bubble-like' sectors, and encouraging that in any way will not provide a cushion for the economy when asset prices head down.

Figure 5: Public Finances
Per cent of GDP



Note: Shaded region shows IMF projections
Source: IMF, *World Economic Outlook*, October 2009

nominal interest rates ran out of steam as short-term rates reached the effective zero bound. These developments amounted to the classic 'liquidity trap' scenario in which expanding aggregate demand with fiscal policy is the textbook response. With investment weak and long-term interest rates falling, there was little near-term risk of crowding out private borrowers. Even in countries where interest rates were still a good distance above the zero bound, governments heeded the admonition to err on the side of stimulus, given the apparent threat to global demand.

Where central banks had run up hard against the zero lower bound, some moved to expand their balance sheets by buying up government as well as privately issued securities. This has blurred, for the time being, the earlier clear distinction between fiscal and monetary policies. Indeed an aspect of the policy responses to the financial crisis has been the heightened degree of apparent cooperation – intended or not – between monetary and fiscal authorities.

All of this is, to repeat, understandable. Moreover, these measures appear to have been effective in numerous countries in freeing up financial markets and supporting demand at the time of the greatest downside risks.

The revived fiscal activism does raise some important questions, however.

First, is the recent set of events a one-off response to a once-in-a-lifetime event, or will fiscal policy authorities, perhaps emboldened by this experience, continue more active attempts at stabilisation policy in the future? There may or may not be good reasons to do so, but should it occur then the ground rules for the conduct of monetary policy over the business cycle will presumably be somewhat different to the ones generally in place prior to 2008.

Second, and perhaps more pressing over the next few years: will governments be able to match their expansionary fiscal activism with a corresponding degree of discipline to restore budgets to sustainable positions? It is noteworthy that for a number of developed countries, debt-to-GDP ratios have tended to trend up since the 1960s; certainly, the pattern among developed economies overall has been one of periods of rough stability, followed by a further increase in the next recession (Figure 5). There are exceptions to this, with Australia being a particularly striking one, where the debt ratio actually does have a cycle around a stable mean, and many Asian countries have traditionally had strong fiscal discipline. Even so, there are plenty of examples of the other pattern.

Third, if governments do respond to the debt trends by fiscal consolidation at some point, this may well inhibit growth for a time. How should monetary policy be conducted in that period? The straightforward answer is presumably that it would remain more accommodative than otherwise.

There may well be attractions for fiscal authorities in committing to a path of relatively rapid fiscal consolidation, thereby allowing monetary policy to be more accommodative than otherwise. This would have the advantage of keeping down the costs of servicing public debt in the meantime. It would also reduce the potential for the 'crowding-out' of private investment normally associated with high fiscal deficits and upward pressure on interest rates, particularly once central bank purchases of government debt cease, as eventually they must.

Such an outcome could also mean, of course, a lengthy period of rather low short-term interest rates. If that continued after the financial sector repair had largely been completed, it would raise its own set of questions about financial stability.

Some commentators have suggested that central banks should temporarily allow inflation to be above what they would be comfortable with over the longer term in order to help inflate away the public debt.[41] Successful pursuit of this very discretionary proposal – and it should be clear the present authors do not propose attempting it – would be no small feat, given the risks. If temporary inflation became built into expectations, it would not reduce the cost of servicing public debt (assuming that it is not all long-term at fixed nominal rates); it may even increase interest rates, since it could increase the inflation risk premium. Second, it has usually proven difficult to ensure that inflation stays high only temporarily, so such a strategy risks higher interest rates in the future to bring inflation back into line, thereby pushing up the costs of servicing debt down the track. Closely related to this is the potential loss of credibility, not just for monetary policy, but also for fiscal authorities.

The main point here is that, in a number of countries, recent events have combined to bring fiscal policy into much more prominence as a countercyclical tool than it has had for a long time, even as questions of debt sustainability continue to increase and, in some cases, the dividing lines between fiscal and monetary policy have become less clear. Discussion about fiscal and monetary policy coordination will probably come back into vogue, since both policies will want to exit from extraordinary settings without cutting short economic recovery, but also without

41 Kenneth Rogoff recommends an inflation target of 6 per cent 'at least for a couple of years', while Greg Mankiw suggests the Federal Reserve attempt to generate 'significant' inflation (Miller 2009).

impairing the long-run credibility of either.[42] At the very least, all of this could well mean that, one way or another, the conduct of monetary policy has an additional complication over the next decade.

5. Conclusions

Looking back over 50 years, it is apparent that there has been a good deal of change in the world of monetary policy. It certainly seems fair to say that the economics profession and the policy-making community have learned a lot about the conduct of monetary policy.

Much of that has arguably been re-learning old lessons (sometimes by absorbing lessons learned by contemporaries in other parts of the world). As we tell the narrative, anyway, the importance of monetary policy – or more correctly the monetary policy framework of a country – was not fully appreciated at the beginning of our five-decade history. The build-up of inflation pressures and the tensions generated by somewhat differing policy objectives across countries helped to set the scene for instability in the 1970s, and for a re-evaluation of the importance of monetary arrangements – perhaps restoring them to the prominence that earlier generations might have given them all along. There followed a long and pretty painful period of restoring price stability, of searching for a robust framework (or a set of possible frameworks), and of constructing strong institutional arrangements for central banks.

By the end of the 1990s, most central bankers would have said that things were in pretty good shape. It was understood (again) how important monetary policy was. Our thinking about instruments and objectives had been clarified, and institutional arrangements had been established which enabled central banks to do their job effectively.

Some far-sighted individuals might also have said that the danger inherent in the 'Great Moderation' was that assumptions about what monetary policy could deliver were getting too comfortable. For if we learned from the 1970s how important monetary policy and its objectives were, and we learned from the 1980s and 1990s the importance of strong, credible policy and institutional frameworks, the past few years have reminded us of the importance of financial stability, and of the limitations as to what monetary policy alone can achieve. Price stability and general macroeconomic stability, to which sound monetary policy surely contributed, did not guarantee financial stability. It may even have inadvertently helped to foster the risk-taking that ultimately brought things undone. Moreover, in the face of an eventual deflationary shock of large magnitude in some key countries, limitations to monetary policy, at least in its conduct via nominal interest rates, became all too clear.

Not only has this ushered in a new period of fiscal activism, whose full dimensions as yet remain unclear, it has – appropriately – reignited the debate about the role of monetary policy in fostering financial stability. Some have argued that the problem was that the apparent success of policy-makers in smoothing the near-term outlook for inflation and economic activity came

42 Blackburn and Christensen (1989) give an overview of the literature examining the coordination of monetary and fiscal policy. Nordhaus (1994) shows that coordination between the fiscal and monetary authorities is desirable during periods of fiscal consolidation; however, he does not address the potential effect of cooperation on central bank independence.

at the cost of allowing the build-up of financial imbalances, which impaired the achievement of these macroeconomic objectives down the track.

It is of course impossible to predict how that debate will be resolved, but it surely has to be resolved, one way or the other, in this cycle. We cannot yet know how challenges in other policy areas – think of climate change for example – will impinge on the conduct of macroeconomic policies.

It is always the tendency – the conceit perhaps – of the current generation to think that we have faced more complex challenges, crafted more ingenious responses, implemented more far-reaching reforms, and established a more enduring framework than did our forebears. The financial crisis of 2008 certainly taxed the capacities of the current generation of policy-makers. Perhaps the challenges of this crisis were greater than those of the past 75 years or so – although those who worked to build the post-War international architecture in the 1940s, or those who had to respond to its demise in the 1970s, or who had to confront the 'great inflation', or various regional crises in the 1980s and 1990s, or who had to build a market economy after the demise of communism, might beg to differ.

Having read some central banking material from the early 1960s in the preparation of this paper, we are struck by the similarity of the language used in those discussions of the macroeconomy to that of today. Perhaps there is an argument to be made that 'plus ça change …'. Or perhaps the main lesson to take from 50 years of history is simply not to forget the old lessons. They have a habit of re-emerging.

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