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Exchange Rate Management in an Era of Global Financial Crises with special reference to Australia

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Abstract

Unless there is a radical reform of the global financial system, it will continue to be conducive to financial crises and the necessary reforms are looking increasingly unlikely. Government rhetoric and actions can often influence in desirable ways both the speculative actions that now determine the exchange rate and the effect of exchange rate movements on the domestic economy. Managing the exchange rate should start with Australian support for measures such as the Tobin tax which dampen speculation. In 2008 and 2009 exchange rate changes were helpful in reducing the impact of the global financial crisis Australia, largely because of a very clear commitment by the Australian government to make preservation of jobs its top priority. In 2009 a rapid rise in the exchange rate was unhelpful. In the short run little can be done about this but the longer run it is possible to offset the adverse effects.

Key words: exchange rates, global financial system, Tobin tax, speculation, macroeconomic policy

JEL Classification: E44, E60, F30, F41,

Introduction

Macroeconomic policy makers did not learn nearly enough from the global financial crisis. In many OECD countries their actions have shown that the most important lessons have not been grasped. This is especially true in the largest ones. Since these have the biggest effect on the global economy, the prospects for the world are not rosy. The international financial system in its present form is both conducive to global financial crises and accentuates the effects if such crises are triggered by other factors. In both the USA and the UK a mixture of ideology about the relative roles of the private market sector and the government in the longer run and short-run domestic political rhetoric have undermined any chance of
appropriate reform. The Euro zone, which must be regarded as a single economic policy area, is in an even worse position given the restrictions on monetary and fiscal policy laid down in the Maastricht treaty and associated agreements. In the following section this paper sets out the types of radical reforms the authors consider necessary and evaluates the arguments for and against such reforms. The section concludes that without such reforms the first quarter of the 21st century will be an era of global financial crises and that such reforms are indeed a forlorn hope.

One reform to the international financial system that has very widespread support among economists is to impose a very small tax on turnover in foreign exchange markets, the so called Tobin tax. This would impose a small cost on sales of foreign exchange to finance transactions but a large cost on speculators who trade in large amounts every day. The Tobin tax and more are discussed in the third section of the paper.

During the GFC, output and employment levels fell. The Federal government and the RBA expressed strong commitments to try to restore both of these. Associated with this was fiscal expansion and monetary loosening. The influence of both of these on expectations as well as on interest rates caused a depreciation of the $Australian, which helped mitigate some of the impact of the crisis on the tradeables sector. This is discussed in the fourth section of the paper.

The strength of the mining sector has led many to worry about the Gregory effect causing a reduction in manufacturing output and in employment generally though the economy. However, the Gregory effect mainly works through appreciations in the exchange rate. Much of this is caused by policy intentions aimed at preventing inflation due the expansion of this sector. However, in section 5 below, we argue that inflation is not as important a policy target as is unemployment. In any case, the evidence suggests that there is no tradeoff
between unemployment levels and inflation until the economy approached full employment and full capacity.

Before continuing with the rest of the paper we pause to look at the theory of exchange rate determination, since it is desirable to have a theoretical structure underlying discussions of policy determination\(^1\). Speculative demand is the dominant consideration in a world in which financial markets have led the way in the growing globalisation. In the case of Australia, in 2004 a ball park figure of the ratio of total annual foreign exchange transactions in Australian dollars to exports plus imports was about 115, i.e. 11,500 per cent (Nevile and Kriesler, 2008). Using the same method, a similar figure for the world could be calculated for as recent a year as 2010\(^2\). At the whole world level the procedure is much more unreliable, but any plausible estimate is larger than the figure calculated for Australia.

Speculators will have some idea of what they expect the value of the exchange rate to be or at least in which direction they expect it to move. Some economists believe that this expectation is based on “economic fundamentals”, which then are seen as playing a key role in the determination of exchange rates through their influence on expectations. However, this need not be the case. Harvey (2001) and Taylor (2004) question the existence of any such fundamentals, suggesting that, in fact, they represent nothing more than an *ex post* justification for actual movements, having no independent existence and, therefore, explanatory power. “For all practical purposes fundamentals do not exist – except when market participants convince themselves that one or another of the many candidates truly matter.” (Taylor 2004)

\(^1\) We do not consider the neoclassical approaches to exchange rate determination. They are well critiqued in Taylor (2004) Chapter 10 and Harvey (2009) Chapter 2.

\(^2\) The key source of data is the Bank for International Settlements *Triennial Central Bank Survey* on global foreign exchange market activity.
Exactly as in the case of the Keynesian determination of the interest rate, where the rate of interest is determined by convention and by beliefs, rather than being anchored to any real factors, so too with exchange rates. There is a boot-strap equilibrium, where, whatever the expected value of the exchange rate is, will, if the expectation is held widely enough and long enough, become the actual value.

In normal times, we have Keynes’ view that people rely on the convention that the future will be like the past. This convention will tend to anchor the exchange rate at its current level and provide some stability to the system. However, we argue that because the present period is subject to periodic financial crises no such anchor is available. The heterodox literature on uncertainty and the determination of expectations in a world of imperfect information will take a central role in the explanation of exchange rates. Harvey (1999) highlights the importance of bandwagon and cash-in effects. The important feature for speculators is not their own beliefs as to likely movements in exchange rates, but, rather, like Keynes’ beauty contest, what they believe about the beliefs of other speculators. However, since the major speculators are all professionals in the finance industry with similar education, training and cultural background, the ‘herd’ effect is likely to be strong\(^3\). (See Harcourt and Kriesler, 2011)

Moreover, the case for the floating exchange rates regime in which we now live, is that there is “out there” a set of stable, long-period equilibrium exchange rates, which a float under competitive conditions will establish and sustain. Furthermore, speculators are systemically beneficial for, with their expert knowledge, they facilitate and hasten the process of economies’ exchange rates achieving and staying at their equilibrium values. However, if, as

\(^3\) An anonymous referee has pointed out that these effects are reinforced by automated trading technology and so-called “technical” trading practices.
heterodox economists argue, foreign exchange markets and indeed, whole economic systems, are characterised by cumulative causation processes (either virtuous or vicious) and fundamental uncertainty, the observed volatility of these regimes and the systemically harmful behaviour of speculators are only to be expected and were in fact experienced (Harcourt and Kriesler, 2011).

**Radical Reform: A Forlorn Hope**

We argue that radical reform is needed at two levels to escape from an era of financial crises. First, the almost complete deregulation of the international financial system in the western world must be reversed. Secondly, because of the importance of the euro zone, the Maastricht treaty must be revised so that effective monetary and fiscal policy is possible in this zone.

The need to reverse the deregulation of the international financial system can be argued at various levels from informed judgements about current institutions and practice to constructing complex theories about how a capitalist economy works and the implications of this for the international financial system and then evaluating the evidence supporting such theories.

The first approach is not a-theoretical. Informed means informed by a theoretical system. This must ultimately rest upon a model of capitalism such as those discussed in the second approach but a much simpler model will suffice - based on noting both the low level of regulation in the international financial sector, and also the intense pursuit of profits, some would say excessive greed, in that sector and then considering the likely effects of this combination. The conclusion is that emphasis on free markets at any cost, which became the
mantra of highly paid participants in the finance sector, was both self-serving and bad economics.

A Special Session of the United Nations was held in 2000 to review and appraise the implementation of the commitments and program adopted by the World Summit for Social Development. As part of the preparation for the meeting, thirty experts from around the world were invited to speak at a UN seminar on how the values underlying social development and those of the market economy fit together. One of the authors of this paper (JWN) attended and predicted that the lack of regulation in the global financial system, plus the belief that the market itself was better able to cure problems as they arose than was any intervention by Government, was a recipe for a severe crisis in the whole world economy. The seminar as a whole agreed with this prediction and indeed went further. Reversal of deregulation was considered essential for a healthy society not just a healthy economy. As one participant put it “When the logic of market transactions invades most spheres of social life, everything becomes a commodity and ultimately nothing is worthy of respect” (United Nations, 2000, p9). Though they were not debated due to lack of time, the seminar made a number of recommendations about international economic institutions, including “increasing regulations particularly to hinder deliberately destabilizing speculation by hedge funds and others…[and] putting more of the costs of international financial crises on international lenders” (United Nations, 2000, p.14). If these or even less radical suggestions are ignored, and the belief that the international financial sector needs to be subject to no constraints beyond those imposed by the market again holds sway, the world economy will remain in an era of financial crises.

This conclusion is reinforced when more complex analyses are examined and evaluated. The precipitating factor in the 2007 downturn is widely accepted. Financial crises are often precipitated by banks reassessing their liabilities, and requiring repayment of large loans.
Businesses, in order to meet those demands, start selling assets, reducing their prices. This leads to re-evaluation of the balance sheets of companies, with many more being driven into serious debt problems, leading to further sales of assets, and to significant asset price falls (Minsky 1985).

The current crisis followed the same basic pattern with two important differences. First, households, as well as firms, went into significant debt; and secondly there is the role of so called ‘toxic assets’, in particular those associated with subprime mortgages. The role of credit rating agencies exacerbated the second factor. The new and very complex instruments were given triple A ratings, although in fact they were anything but triple A. When it became apparent that, despite the credit rating agencies statements to the contrary, the assets held by many enterprises were in fact worth substantially less than their current valuation and that many financial institutions were heavily exposed to such assets, the whole house of cards came tumbling down (Nevile and Kriesler, 2011).

A conclusion on what precipitates a crisis does not answer the question about why crises occur. This requires analysis of the nature of a capitalist economy. We will look at two competing theories: the first Keynesian and the second the efficient markets hypothesis.

The Keynesian theory is *The General Theory* itself updated to take account of the changes in institutions and knowledge that have occurred since 1936. As the resulting theory is well known to those at this conference, we will not attempt to spell out it in detail, but just summarize two features that are the hallmarks of Keynesian economics.

The first is that Keynesian economics is a macroeconomics in which the level of output and income are determined by effective demand. The second is that we cannot reach a useful macroeconomics by building on microeconomic foundations. This is not just an aggregation
problem, severe though that problem is, but a belief that the fallacy of composition is fundamental to macroeconomics.

While Keynesian theory has developed considerably since *The General Theory*, in that book Keynes put his finger on the issue, which in the context of this paper, is decisive in choosing between the two theories. This is whether there is an adequate explanation of “the crisis - the fact that the substitution of a downward for an upward tendency [the upper turning point in a trade cycle] often takes place suddenly and violently whereas there is no such sharp turning point when an upward is substituted for a downward tendency” (Keynes 1936 p. 314, italics in the original). Keynesians do have a convincing theory of the existence of crises, while as we shall see the efficient market hypothesis cannot give any explanation. Moreover, Keynes’ own explanation of what occurs could have been written as a description of the events of 2007/08. It is, he says

“It is the nature of organized investment markets, under the influence of purchasers largely ignorant of what they are buying and of speculators who are more concerned with forecasting the next shift of market sentiment than with a reasonable estimate of the future yield of capital-assets, that, when disillusion falls upon an over-optimistic and over-bought market, it should fall with sudden and even catastrophic force.” (Keynes, 1936, pp. 315-6).

The efficient markets hypothesis may be less well known and a brief exposition follows.4 There are three forms of the theory. One, known as the weak form, is that prices in financial markets follow a “random walk” in the very short run. In less technical language this means

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4 Those who would like a fuller description and evaluation of the efficient markets hypothesis are referred to the excellent account in Quiggin (2010) which is not overly technical. For a superbly clear technical exposition, see the “tome for our times”, Taylor (2010)
that on average the best prediction of tomorrow’s (or perhaps next minute’s) price is the current price. It is widely accepted that this holds in normal times but as we have seen it can be overwhelmed by the herd instinct in times that are anything but normal.

The more stringent, or strong, version applies the same idea more widely. If traders know all the publicly available information about the likely future earnings of companies they will take this information into account when buying or selling on the stock exchange. Therefore the prices at which they trade will be the best judgment about the future values of the stocks traded. A “Chicago School” economist and noted finance theorist Eugene Fama went one step further and argued that the prices of stocks incorporate all information known to traders even if some is not known to the public (Quiggin, 2010).

If either of the more stringent forms of the hypothesis is correct, crises could only occur in very unusual circumstances in which the information known to traders changed substantially and dramatically. The dotcom bubble of the latter part of the 1990s was only the most convincing of a number of demonstrations that crises could and did occur where these conditions were not present Quiggin (2010). The continuing defense of the strong version of the efficient markets hypothesis by Fama and others is a triumph of ideology over decades, or rather centuries, of experience.

The second radical change is quite specific but important. The Maastricht treaty and associated agreements must be revised so that effective monetary and fiscal policy is possible in the Euro zone. Monetary policy is the biggest problem because not only do countries in the Euro zone not have their own central bank but under the Maastricht treaty price stability is

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5 Although it is not relevant to our contention that the efficient markets hypothesis contradicts the possibility of crises, in two crisp sentences Quiggin (2010) outlines another well known problem. “[t]he Black-Scholes pricing rule shows how an option price ought to be determined in an efficient market. But traders can only make a profit using Black-Scholes and similar rules to value derivatives if the market price deviates from the ‘correct price’, that is, if the Efficient Markets Hypothesis is not satisfied” p.40.
the overriding objective of the European Central Bank (ECB). Price stability is defined as “inflation rates below, but close to, 2% over the medium term” (ECB web site)\textsuperscript{6}. Moreover, the ECB has no hesitation in applying this policy since it believes that this can do no harm to the real economy as in the longer run monetary policy affects only prices. This is an unsustainable view, roundly countered by Solow (2000) himself. The result of this is clear in newspaper headlines about concerns over sovereign debt issues in countries in the Euro zone. If the well known examples of Greece, Ireland, Italy and Spain are now in the firing line, what hope have newer members of the Euro zone such as Estonia and Slovakia?

Fiscal policy is also neutered but individual countries have not been as rigid in fulfilling their obligations under the Treaty. These are very stringent limiting the deficit in general government finances to 3% of GDP in any year, whatever the level of economic activity in the economy. Moreover, the public debt-to-GDP ratio must be 60% or less and general government finances must be close to balance or in surplus in the medium term. Penalties can be imposed if the rules are not observed. These usually prevent sustained budgetary policy whose compliance with the rules is grossly implausible. Compliance with the rules has been interpreted flexibly, but in Germany at least there are signs that the pendulum is starting to swing the other way. For example, Merkel has suggested the way forward should involve sharper punishment for states that violate the bloc's budget discipline rules, which have been repeatedly breached in the last decade (Reuters, 14/9/2011). At least the 3% at any price rule must be abolished before Euro zone countries can have any worthwhile fiscal policy.\textsuperscript{7}


\textsuperscript{7} In a press conference after the meeting of EU countries that concluded on 2/11/2011 the French President and German Chancellor announced that they were pushing for a treaty among Euro zone countries that would provide automatic sanctions for a breach of the three percent rule and binding debt brakes on countries wider budgetary provisions which can be verified by the European Court of Justice (Reuters 5/12/2011).
Sand in the Gears: The Tobin Tax and More

In *The General Theory* Keynes suggested that a substantial transfer tax on securities transactions could reduce speculation in financial markets. (Keynes, 1936, pp 104-5) In 1972 Tobin proposed a tax on foreign exchange transactions. It did not attract a lot of interest for many years, but the United Nations Human Development report for 1994 took up the idea and included a contribution from Tobin explaining his proposal and suggesting a tax of 0.5% with the proceeds used to finance development (Langmore, 2010). The UN organized a conference in 1995. The papers given at this conference were published in Mahbub al Haq, Kaul and Grundberg (1996).

The Tobin tax proposal was raised again during the Special Session of the UN General Assembly on Social Development in June 2000. Canada proposed a study of the proposal. Due to opposition, especially from the United States, where Republicans were fiercely opposed to a Tobin tax, a compromise led to agreement on a study of “innovative sources of funding for development” (Langmore, 2010) The eminent British economist Sir Anthony Atkinson (Tony to his friends) agreed to lead the project, which was carried out at the UN University’s World Institute for Development Studies. The results were published in Atkinson (2004).

With the global financial crisis, support for a Tobin tax blossomed in European countries. Taxpayers had financed expensive bail outs of banks, fuelling demands for taxes on financial institutions. In August 2009 the then British Prime Minister, Gordon Brown, adopted in principle a proposal from his most senior financial regulator to tax all financial transactions, not just those on foreign exchange markets. He presented this proposal for a financial transactions tax (FTT) to the Group of 20 meeting in November 2009. This attracted interest among other European governments as a means of reducing the activities of the financial
sector, thought to have grown larger than its useful size, as well as reducing speculative activities and raising revenue. In June 2011 the European Commission announced plans to introduce a FTT (Langmore, 2011). President Sarkozy and Chancellor Merkel advocated adoption of a FTT at the meeting of the G20 in Paris in November. The most recent Working Paper from the IMF on the subject, which assesses the administrative feasibility of a FTT, concludes that ‘In principle, an FTT is no more difficult and, in some respects easier, to administer than other taxes’. (Brondolo, 2011, p5)

Many years ago, one of the authors (GCH), in complete ignorance of the existence of the literature on the Tobin Tax, published an article in *EPW*, which he was later informed was a generalization of the Tobin tax, see Harcourt (1994; 1995)

As we noted above the traditional case for speculation was that it reduced the amplitude of fluctuations in prices and helped markets to reach their equilibrium levels more quickly than otherwise would have been the case. If though we have to deal with cumulative movements, either virtuous or vile, there will be no equilibrium 'out there' waiting to be found. We have already mentioned that the market for foreign exchange is dominated by speculative forces, Moreover, recent technical progress has reduced the short period to a length of historical time which is probably even shorter than the corresponding length of Marshall's market day.

Now these phenomena are spread, if not worldwide, at least over most of the developed world, so we need to think about international agreements with which to tackle their effects, as well as attempting to reintroduce controls, for example, on international capital flows, even though the ideological climate and recent technological advances make this unrealistic, there is a lot to be said for getting agreements on some 'Marshallian-Pigovian' carrot and stick measures: that is to say, while not directly stopping anyone from doing anything, yet indirectly giving them incentives radically to change their behaviour.
If we want exchange rates to reflect real economic forces - trading prospects, real investment opportunities - we need greatly to reduce speculation and thereby its effects on the determination of exchange rates in both the short and longer terms. For neither in the short term nor on average over longer periods do exchange rates at the moment reflect these economic activities. This is especially so if we accept that there is no underlying set of long-term equilibrium exchange rates, reflecting a long-term equilibrium of an interrelated system, but, rather, changing structures which reflect the appreciation and depreciation of individual rates because of the underlying differences in the growth rates of productivity and national products.

A simple way of tackling speculation and its effects is through the taxation systems of the various countries. The taxation authorities would require that the turnovers of the foreign exchange dealers who pay tax in their countries be classified into three broad categories: foreign exchange bought and sold for purposes of trade (and consumption, for example, tourism) and for long-term investment either in securities or directly. (In so far as the traders were concerned with the sale or purchase of commodities, spot or future, a case would have to be made by the taxpayers that these were to help production, or that they were legitimate sales, rather than for speculation.) This would leave a residual third category which would be mainly accounted for by speculative activities. Then the proportions of each category in total turnovers would be used to assess the total taxation paid on the profits of the dealers. There would be a much higher rate for the third category than for the first two, so that the larger was the amount of speculation which was financed by foreign exchange purchases or sales, the greater would be the taxation on the profits of the dealers.

Similarly, the purchasers or sellers for whom the dealers were acting would have their business or private incomes taxed at different rates according to the categories into which
their transactions fitted. For companies, a higher rate of taxation would be levied in relation to their speculative purchases or sales. For individuals, a surtax on their income tax would be levied, according to the extent of their speculative activities.

We still think that there is merit in raising the ideas again, even though we doubt that Treasurer Swan would be inclined to take them on board in the present political climate in Australia.

2008 and 2009 – making speculators work for you

As the foreign exchange rate directly affects the prices of exports and imports, it therefore affects the price of all goods and services which either use imports as inputs or which compete with imports and exports. From the point of view of employment, it is particularly export industries and import competing industries that are important though importers also employ people in Australia. Employment in actual or potential export and import competing industries (usually called tradeables) is about two thirds of total employment.

In Australia, the global financial crisis caused a substantial rise in unemployment rates, from 4.0 per cent in February 2008 to 5.9 per cent in August 2009. Growth in GDP fell substantially over the same period. As shown in the Figure below, in the same period there was a significant fall in the value of the $ Australian. The Rudd Government, elected in 2007, made very clear its commitment to using fiscal and other policies to minimise the effects of the global financial crisis on employment and the Reserve Bank made a series of cuts in interest rates. Australian interest rates probably would have fallen in any case because of the effect of the global financial crisis on commodity prices but these strong policy moves reinforced the view that the Australian dollar would fall and speculators acted accordingly.
The resulting sharp fall in the value of the Australian dollar helped moderate the effects of the crisis in the tradeables sector of the Australian economy.

**Adverse exchange rate movements – Avoiding unnecessary interest rate rises and finessing the Gregory effect**

Over the last 25 years, as the importance of the financial sector has grown, more emphasis has been put on keeping inflation low compared to keeping unemployment low. Given orthodox economic theory this has given an upward bias to interest rates. In the Kriesler and Nevile paper given at last year’s conference the consequences of this were discussed. A summary of that discussion follows plus some new empirical evidence supporting our position.
In a speech to the National Press Club, just before his retirement as Governor of the Reserve Bank of Australia, Bernie Fraser said that monetary policy was becoming the hostage of influential financial markets with a vested interest in making the Reserve Bank give greater weight to inflation than employment. In Australia, and many other counties, Governments have defended a concentration on keeping inflation at a very low rate with the claim that high rates of inflation adversely affect longer run growth in output and employment. There is no doubt that this is true for very high rates of inflation, but there is substantial evidence that this is not the case when the rate of inflation is below, say, 10 per cent. For example in a study of the experience of more than a hundred countries over thirty years, Barro (1996) found that there was evidence of “causation from higher long-term inflation to reduced growth and investment [but immediately commented that] it should be stressed that the clear evidence for the adverse effects of inflation comes from the experience of high inflation” (p.168). The general tenor of Barro’s article suggests that he had inflation rates above 20 per cent a year in mind when he used the term high.

Many media commentators and some academics have countered the argument for a reduction in the priority given to fighting inflation with the claim that such a reduction runs the risk of making inflation harder to contain whereas pre-emptive interest rate rises add credibility to policy which lessens the risk of an increase in inflation. This is true but the argument is completely symmetrical with respect to unemployment. Pre-emptive increases in policy to expand employment equally lessen the risk of an increase in unemployment.

In any case, there is serious doubt about the association of higher employment levels with inflation, at least at levels of capacity utilisation below full capacity of the labour force or of the capital stock. Most contemporary arguments about the dangers of inflation associated with low levels of unemployment rest the basis of the neoclassical model with its emphasis on NAIRU. However, work by heterodox economist have questioned the basis of this theory,
and has argued that reasonably low levels of unemployment are possible with little if any inflationary implications. In this case, inflation only becomes a potential cost of reducing unemployment at low levels of unemployment, and other policies, such as incomes policies, may further alleviate the problem.

These results have been replicated in more conventional economic research by the Federal Reserve of New York (Peach et al., 2011) Their results support the idea of a “threshold Phillips Curve”, where the Phillips curve “relationship is relevant only when conditions in the economy are either extremely slack or extremely tight.” (p. 6) They do not, however, suggest theoretical explanations for this relationship. Nevertheless, it provides additional support for the idea that, over large ranges of output, associated with the normal operations of the economy, there is no relationship between unemployment levels and inflation. In other words, policies to reduce unemployment, especially when it is at high levels, will not be associated with increases in inflation until the unemployment rate is quite low.

Conclusion

The foreign exchange rate is one of the most important prices in the economy and one whose movements have become increasingly determined by speculators. Many financial commentators, academic economists and policy advisors have argued that this greatly limits the freedom of national governments in determining macroeconomic policy. It is certainly true that the exchange rate does constrain the actions of policy makers and that over the last 25 years, as both the importance of the financial sector has grown and it became more integrated globally, this constraint has become more binding. However, we argue that the constraint is not as great as usually assumed and that exchange management can not only

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8 See for example Kriesler and Lavoie (2007).
reduce the constraint but sometimes use the actions of speculators to benefit the domestic economy.

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