For the Student

Currency Unions, Currency Boards and Other Fixed Exchange Rate Arrangements

Mark Crosby
Department of Economics
The University of Melbourne

1. Introduction

With the current exchange rate between the Australian and United States dollars at close to 50 US cents per Australian dollar there is a great deal of media and popular attention directed to alternative exchange rate arrangements that might keep the exchange rate at a more 'reasonable' level. Popular perception is that flexible exchange rates lead both to too much variability in the exchange rate and to levels of the exchange rate that are sometimes a long way from where they should be (referred to as exchange rate misalignment). These perceptions have led many writers to argue that exchange rates should be fixed in value, as they were for most of Australia’s history until the early 1970s. The problem is how to fix the exchange rate. Among the available options for fixing the exchange rate are a return to the gold standard system or Bretton Woods system of fixed exchange rates that prevailed until the early 1970s, a currency union, a currency board, dollarisation, or an exchange rate peg. In this article the details of each of these exchange rate systems are discussed, along with the costs and benefits of each system. The article concludes with a summing up of the evidence and a suggestion as to which exchange rate arrangement is best.

2. The Gold Standard Period

The gold standard is characterised by the use of gold coins, or notes backed by gold (in full or in part), as the money stock of an economy. In 1819 the British Government passed the Resumption Act, which required the Bank of England to resume its practice of exchanging currency notes for gold on demand at a fixed rate. Restrictions on the export of gold were also removed at this time. Later in the nineteenth century Germany, Japan and a number of other countries adopted the gold standard. In 1879 the United States pegged greenbacks to gold. During this period Australia was part of the gold standard system, and Australian and British notes and coins were in circulation in Australia. The exchange rate between the British and Australian pound was not fixed, but fluctuated within a range of plus or minus 1.75 per cent (the 'gold points') for most of this time (so that many writers treat exchange rates during this period as fixed).

Under the gold standard the primary responsibility of a central bank was to preserve the convertibility of notes and coins for gold at the official price (a role left to the private banking system in Australia). With the price of gold in terms of domestic currency fixed, the exchange rate between any two countries would just be equal to the ratio of the gold price in the two countries. Australia and Britain fixed the gold price at the same level, so that our exchange rate was one. The price of gold in the United States was almost five times that in Australia, and so the exchange rate between Australia or Britain and the United States was $4.867/£. If the exchange rate moved too far from this ratio...
it would be profitable to ship gold from one country to another.

To maintain the fixed price of gold a country’s central bank needed an adequate stock of gold reserves. In order to maintain a sufficient level of reserves, countries needed to avoid having large current account deficits that were not financed through capital inflows, since deficits on the balance of payments had to be financed by shipments of gold from deficit countries to surplus countries. To avoid gold movements central banks adopted policies which pushed the balance of payments towards equilibrium (where gold movements are zero).

It is not true to say that this was a period of current account balance. Between 1870 and 1914 Britain’s current account surplus averaged 5.2 per cent of GDP. Australia’s current account exhibited large fluctuations, from a current account deficit of 14.2 per cent of GDP in 1885 to a surplus of 4.4 per cent in 1907. For most of this period Australia financed current account deficits through capital flows from Britain.

With the price of currencies fixed in terms of gold, the gold standard limited the growth of the world money supply, ensuring stability in world prices. From 1816 to 1849 world output was rising while little new gold was discovered, leading to falling prices in the gold standard countries. From 1849 to 1870 there were large gold discoveries in Australia and California, leading to increases in money supplies and in prices. From 1870 to the 1890s output rose and, with no major gold discoveries, prices fell. Finally, from 1896 to 1913 a further increase in world gold supplies led to increasing prices.

Price levels for select countries in various years are shown in Table 1. These show that prices tended to be close together in the gold standard countries, but did move up and down in line with gold production. While inflation rates were small over the gold standard period, movements in prices were quite large.

During the pre 1914 period policy was aimed exclusively at external balance. No consideration was paid to issues such as unemployment, though inflation was low because of the low rate of growth of the money supply.

Gold standards are usually abandoned during wars, as governments attempt to raise money to finance budget deficits through printing notes and by issuing bonds. World War I was no exception and prices rose dramatically in most countries during and immediately after World War I.

The United States returned to the gold standard system in 1919, and in 1922 a number of countries including Britain, France, Italy and Japan agreed on a return to gold at the pre-war price of gold in each country. Australia, with its exchange rate fixed to the British pound, would return to the gold standard with Britain. In order to return the price of gold to its pre-war level, Britain had to reduce its general price level, and the subsequent contractionary policies in the early 1920s led to high unemployment and a stagnant economy in Britain for almost the entire 1920s. Since Australia’s wartime increase in prices was not as large as Britain’s, the required reduction in prices was not as large, and hence the adverse consequences of the deflation were small.

At the end of the 1920s the gold standard system collapsed, with countries leaving in rapid succession in 1930 and 1931. The reasons for this were basically the unwillingness of major participants to adhere to the rules of the game. Countries that ran balance of payments

<table>
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<tr>
<th>Year</th>
<th>France</th>
<th>Germany</th>
<th>United States</th>
<th>United Kingdom</th>
<th>Australia</th>
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<tbody>
<tr>
<td>1816</td>
<td>143</td>
<td>94</td>
<td>150</td>
<td>147</td>
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<tr>
<td>1849</td>
<td>94</td>
<td>67</td>
<td>82</td>
<td>86</td>
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<tr>
<td>1873</td>
<td>122</td>
<td>114</td>
<td>137</td>
<td>130</td>
<td>105</td>
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<tr>
<td>1896</td>
<td>69</td>
<td>69</td>
<td>64</td>
<td>72</td>
<td>80</td>
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<td>1913</td>
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surpluses (especially France) simply accumulated gold and increased their holdings of gold reserves. This led to worldwide contractions in money, harming both debtor and creditor countries. Australia left the gold standard system in 1931, due to an almost complete loss of reserves. The contrast between the long period of stability in the pre 1914 period with the 1920s experience of the gold standard shows that the gold standard system only works well if countries cooperate to make it work.


The Bretton Woods system sought to solve the problem of countries having insufficient gold reserves by having the United States at the centre of the world’s monetary system after 1945. The $US was to be convertible to gold at the exchange rate of $35 per ounce, and all other countries were to fix their exchange rates to the $US, holding reserves in $US and not in gold. The stability of the system relied on the United States not producing more money than was feasible given its gold stock. Exchange rates were pegged to the $US, but were on occasion realigned if required. The reason for allowing realignments of exchange rates was to avoid problems of adjustment by countries with overvalued exchange rates, such as Britain in the 1920s.

The Bretton Woods system broke down in the early 1970s, due to the excessive levels of money growth and inflation in the United States. By the late 1960s it was becoming clear that the United States would not be able to exchange gold for $US at the agreed price, and President Nixon suspended convertibility. During the early 1970s most countries adjusted their exchange rate relative to the $US or allowed their exchange rate to float. Australia formally floated the exchange rate in 1983.

4. Currency Unions, Dollarisation and Currency Boards

A currency union is an agreement to issue a single currency in one or more countries, such as the agreement to launch one currency, the Euro, in much of Europe. From the 1990s there has been renewed attention to the benefits of currency unions in general, and locally there has been some interest in New Zealand in particular in the formation of an Australia -- New Zealand (ANZ) currency union of some form. This interest seems to have arisen as a result of several recent events. First, the lead up to and successful launch of the Euro seems to have spurred interest in other potential currency unions, including a North American currency union, an Asian currency union, and an ANZ currency union. Second, the Asian crisis has led to a perception that small countries’ currencies are particularly vulnerable to speculative attacks, and that ‘mergers’ with larger countries might prevent such attacks. Finally, interest in New Zealand in a currency union seems to be related to the poor growth performance of the New Zealand economy in the late 1990s, especially when compared with Australia. This has fuelled criticism of the Reserve Bank of New Zealand’s economic management and led to questions about alternative monetary policy arrangements.

The economics of currency unions are based on the optimal currency area literature originating with Mundell (1961). In short, the extent to which any set of countries form an optimal currency area, and could therefore be considered candidates for a currency union, depends on the extent of synchronisation of business cycles in the set of countries, and on the extent to which factors are mobile between countries. If business cycles are highly synchronised there is little need for independent monetary policies, and countries could share the same currency unit with little cost. In such a case the main benefit to a currency union is the reduced transactions costs that arise from having a single currency, rather than multiple currencies. If business cycles are not synchronised, but factors are mobile between countries, then factors should migrate from low growth regions to high growth regions, obviating the need for independent monetary policy.

The synchronisation issue is related to the benefits to an individual country of having independent monetary policy. Under a currency union there will be only one central bank issuing currency and affecting interest rates and
inflation for all of the countries in the union. If one country is in recession while all other countries in the union are not, it will be difficult for that one country to persuade the central bank to try and stimulate the economy, since this will cause inflation in the other countries in the union. If the countries are generally in the same phase of the business cycle (recession or expansion at the same time) then there will be general agreement on the appropriate stance of monetary policy. In this case currency union countries will not lose much from having only a small influence over monetary policy.2

The importance of factor mobility to countries in a currency union can be illustrated with a simple example. If Greece and Britain form a currency union it is unlikely that their business cycles will be highly correlated. If the British economy is growing strongly while the Greek economy is not, the traditional solution of loose monetary policy in Greece will not be an option since the two countries are members of a currency union. However, the migration of unemployed workers from Greece to Britain will reduce the need for independent monetary policy by offsetting the adverse effects on unemployment of the negative shock in Greece. This argument was recognised by the designers of one currency in Europe, and the transition to one currency was preceded by a number of measures intended to make it easier for goods and workers to move between countries inside the union.

The theory of optimal currency areas is simple and intuitive, but deciding whether or not two countries are actually good candidates for one currency is not straightforward. How much synchronisation and factor mobility is necessary to justify a currency union? Bayoumi and Eichengreen (1997) ranked countries in terms of their suitability to form a currency union with Japan or the United States, which is about as close as any authors have come to a simple yes or no answer to the question of whether or not two countries should issue a single currency.

There has been some interest in the private sector in New Zealand in a possible ANZ currency union for some time.3 Grimes, Holmes and Bowden (2000) find that there is widespread support amongst New Zealand manufacturers for a currency union with Australia. This support is due to the reduction in exchange rate volatility and the reduction in transactions costs (of having to change currencies) that a currency union would bring. Interest in a currency union in Australia and New Zealand has gained some momentum since the New Zealand Prime Minister (Helen Clark) made a speech to the United Nations in September 2000, in which she stated that such a union might be inevitable (see Hartcher 2000). Prior to this time the New Zealand Government had been opposed to such an idea, and with no discussion from Australian politicians a currency union seemed unlikely to get off the ground.

Since Helen Clark’s speech there has been some discussion in the Australian press and by Australian politicians on the issue of an ANZ currency union. However, in Australia there appears to be widespread acceptance of dollarisation by New Zealand (where they unilaterally decide to adopt the Australian dollar) but comparatively little acceptance for a currency union. For example, the Governor of the Reserve Bank of Australia (RBA) has said that he would be cooperative, though it was chiefly a decision for New Zealand (see Hartcher 2000). While dollarisation is clearly a decision for New Zealand, a currency union is a decision only both countries can make. Furthermore, given the much larger size of the Australian economy, the formation of a currency union would very much be a decision for the Australian public and politicians.

The only difference between forming a currency union and dollarisation is that with a currency union all of the members of the union typically have a say in the conduct of monetary policy. Dollarisation involves the delegation of monetary policy to one country (Australia in the case of New Zealand) so that factors relevant to the conduct of monetary policy in the country that adopts the issuing currency are ignored. At the moment Argentina is operating a currency board system and is considering full dollarisation (adoption of the $US as the sole currency).
In considering the ANZ case the relevant issues are similar whether one is considering a currency union or dollarisation. The differences are that dollarisation would be politically more acceptable to Australia, but less acceptable to New Zealand. With the RBA continuing to conduct monetary policy according to the RBA Act dollarisation would have minimal impact on the Australian economy, with the only impact being an increase in trade and reduction in transactions costs between Australia and New Zealand. A currency union would affect both countries, and the issue is whether Australia and New Zealand do form an optimal currency area.

A currency board is similar in theory to both a gold standard system and to dollarisation. Under a currency board the central bank holds reserves in the form of foreign currency, and agrees to exchange domestic currency for foreign currency at a fixed exchange rate. Currently the most common form of the currency board has $US as the currency backing the domestic note issue, though historically Commonwealth countries have used the British pound as the backing for domestic note issue, while other countries have had currency boards using the French Franc. At the moment Argentina, Estonia and Hong Kong are operating currency boards, while a number of other smaller countries are considering the introduction of such a regime.

5. Conclusions

All of the fixed exchange rate regimes discussed in this article have similar costs and benefits. Under a fixed exchange rate system small countries cannot conduct independent monetary policy. The intuition for this is straightforward. If a country, such as Australia, were to consistently have higher inflation than other countries, our competitive position worsens when the exchange rate is fixed. The loss in competitiveness will lead to a worsening balance of payments position, and this will sooner or later need to be remedied by a tightening of monetary policy and lower inflation. Some economists see this lack of independence as a problem, others as a benefit, of a fixed exchange rate. The problem is that countries lose the ability to utilise monetary policy for stabilisation purposes. The lack of independence is viewed as an advantage, however, in countries plagued by loose monetary policy and high inflation. For countries such as Argentina and Hong Kong this was a major benefit of having a fixed exchange rate. Argentina has had a history of very loose monetary policy and high inflation. Such policy is not possible under a fixed exchange rate regime, and as long as the Argentinian monetary authority can credibly commit to the fixed exchange rate regime, inflation will remain low. In Hong Kong there was also a great deal of monetary policy instability and uncertainty in 1983, which made a fixed exchange rate very attractive.

While fixed exchange rates undeniably reduce exchange rate volatility, there are also costs to fixing the exchange rate. First, any adjustment of the exchange rate that is necessary when the exchange rate is fixed is usually costly. The quasi-fixed exchange rates that were in operation in the Asian crisis countries during the early 1990s were among the causes of the crisis, and made the adjustments after 1997 very difficult. Second, the ability to use monetary policy to stabilise the economy can be very beneficial to an economy. The strong performance of the Australian economy after the onset of the Asian crisis is due in part to the exchange rate adjustment that has occurred over the last three years.

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Endnotes

1. Some countries, Australia among them, initially held their reserves in British pounds, though eventually most countries held reserves predominantly in $US.

2. In Europe each country that is a member of the European Monetary Union is entitled to one member on the Board of the European Central Bank. Hence each country has some influence over policy, though the influence of any individual country is small.

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4. There is now a very large literature on the role of the exchange rate pegs (unofficial fixed exchange rates against the $US or a basket of currencies) in causing the crisis and in making the post-crisis adjustment more difficult. See Radelet and Sachs (1998) for a full discussion.

References