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**HISTORY RHYMES – A
COMPARISON OF CHINA TODAY
WITH JAPAN IN THE 1920s**

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Johns Hopkins Institute for Applied Economics,
Global Health, and Study of Business Enterprise



History Rhymes – A Comparison of China Today with Japan in the 1920s

By John Greenwood

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About the Series

The Studies in Applied Economics Series is under the general direction of Professor Steve H. Hanke, co-director of the Johns Hopkins institute for Applied Economics, Global Health, and the Study of Business Enterprise (hanke@jhu.edu). This working paper is one in a series on currency boards and monetary systems. The working papers will fill gaps in the history, statistics and scholarship of the subject. The authors are mainly students at the Johns Hopkins University in Baltimore.

About the Author

John Greenwood is the Chief Economist at Invesco Ltd, a global asset management company. As editor of the Asian Monetary Monitor over the period 1977-96, he is widely credited as the designer of the restored currency board system in Hong Kong at the time of the currency crisis in 1983, a model for numerous subsequent currency board systems. Holding an MA and Honorary Doctorate from the University of Edinburgh, he is the author of “Hong Kong’s Link to the US Dollar – Origins and Evolution” (Hong Kong University Press, 2007).

Abstract

During the First World War Japan experienced large surpluses on its external accounts which, via monetary expansion, drove up prices to an uncompetitive level compared with other leading economies such as the US and the UK. Similarly, following China’s devaluation of its currency and exchange rate reunification in 1994 along with the adoption of a fixed rate against the US dollar, China gradually built up huge external surpluses in the early 2000s, which continued even after the 2005-14 appreciation of the currency. For Japan in the 1920s the result of the overvaluation was a decade of financial crises, slow growth, agricultural depression and deflation. Only in December 1931 did the authorities finally abandon the fetish of returning to the pre-war exchange rate and devalue the yen, allowing Japan’s external accounts to return to equilibrium. In 2017, China is faced with essentially a similar set of choices as Japan in the 1920s.

Acknowledgements

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Keywords: Central bank, Purchasing power parity, Balance of payments, Japan, China

Introduction

The Chinese currency has been depreciating fairly continuously since January 2014 when it peaked at a value of CNY 6.04 against the US dollar. Today it trades at 6.87, a depreciation of 12% from its peak.

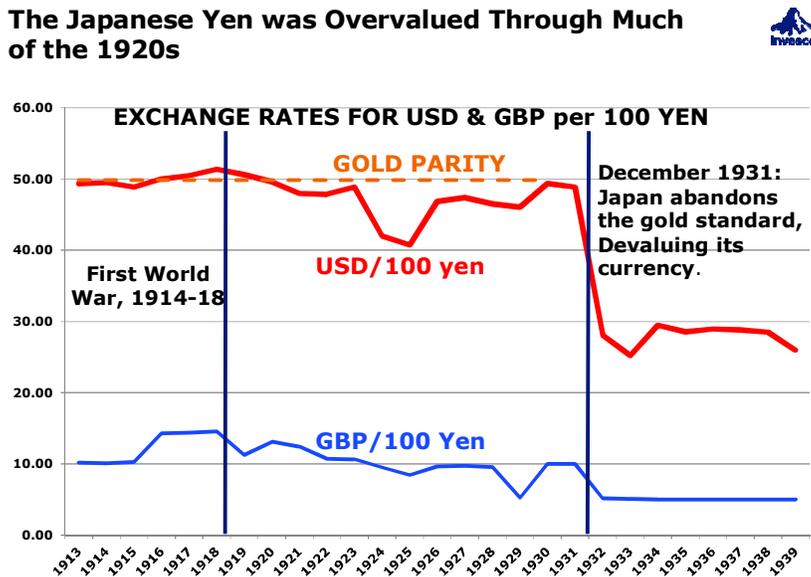
At the same time, China's external balance of payments has become significantly weaker, with a substantial decline in the current account surplus relative to GDP since 2010, and more recently persistent private sector capital outflows requiring the central bank both to intervene to stabilise the value of the currency, and to tighten controls on capital outflows. The question is: how long will the Chinese Yuan (CNY or RMB) continue to depreciate, and how long will the Chinese authorities be willing to run down China's huge stock of exchange reserves?

For a clue to the answers it is useful to consider some interesting parallels between the economic experience of Japan in the 1920s and the recent experience of China. Based on that historical episode from Japan in the 1920s, it seems likely that China's problems on its external accounts, and the consequent implications for the currency, could continue for several more years.

Section 1. Japan's External Disequilibrium in the 1920s

From 1897 until 1931 the Japanese monetary system was based – at least formally - on the gold standard. The gold parity (shown by the gold dashed line in Figure 1) was set equivalent

Figure 1.



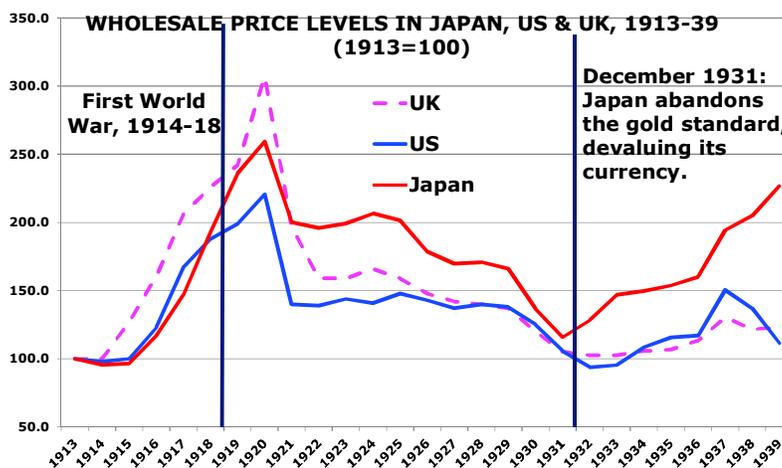
to US\$49.85, meaning that 100 Japanese yen could be exchanged for a certain weight and fineness of gold which in turn could be exchanged for essentially an equivalent, fixed amount of US\$ (USD). In modern terminology we would say that the yen was fixed at US\$ 49.85 for 100 Japanese yen (JPY), or very close to JPY 2 per USD.

Japan entered the First World War in August 1914 as an ally of Britain with the aim of taking over German-controlled territories in the Asia-Pacific. By now an industrialised economy, Japan was able to sell all kinds of goods – including war materials – to several participants in the conflict. The result was a steep increase in foreign earnings, and upward pressure on the currency.

However, under the rules of the gold standard (which Japan maintained until September 1917, when the US also left the gold standard), Japan could not permit its currency to appreciate, and instead allowed the foreign currency inflows to translate into faster money and credit growth, which produced considerable inflation. As a result, after the war was over, Japan found itself with an internal price level that was too high, at prevailing exchange rates, to be competitive. Consequently, throughout the 1920s there was downward pressure on the exchange rate which the Bank of Japan helped to absorb with sales of gold. Therefore while the US (in June 1919) and the UK (in April 1925) returned to the gold standard at their pre-war parities, Japan chose not to do so until January 1930. Ultimately, after struggling with an overvalued exchange rate for just over a decade, the Japanese authorities abandoned the attempt to restore or maintain the pre-war fixed parity with gold, and devalued the currency in December 1931. From then onwards until April 1949 the Japanese currency was essentially on a paper standard.

Figure 2.

Domestic price levels in Japan were too high at the pre-war, fixed exchange rate

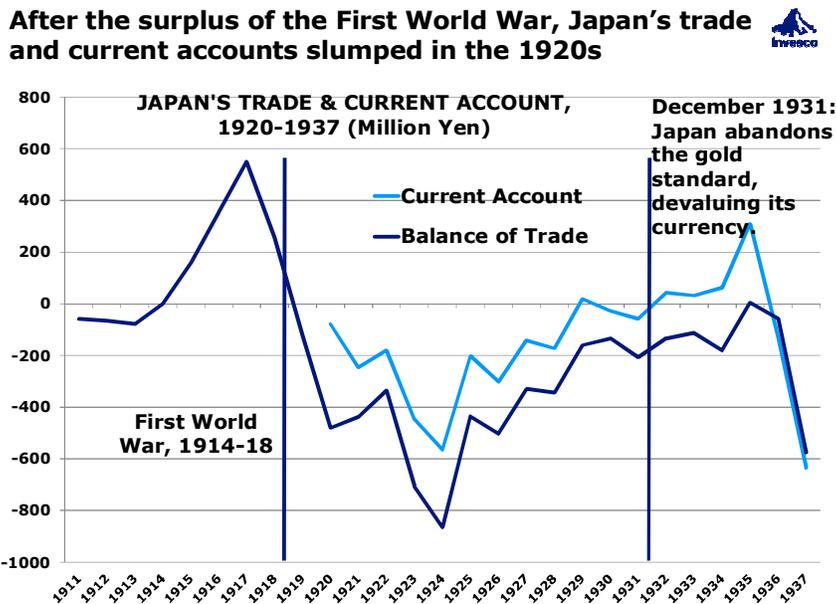


During the First World War price levels in the UK, the US and Japan increased dramatically. Not surprisingly the UK led the way (Figure 2), but American and Japanese prices followed with a lag of about a year. After the war ended, prices continued to rise until the abrupt and deep recession of January 1920 to July 1921 (based on NBER cycle dates for the US). Thereafter price levels in all three countries fell steeply, but they fell less in Japan than in either the US or the UK, leaving the Japanese economy attempting to compete at the pre-

war exchange rate but with a price level that, in 1922, was 41% higher than US prices, and 23% higher than UK prices.

Inevitably this meant that Japan suffered continuous trade deficits and capital outflows during the 1920s, which in turn meant the Bank of Japan was selling gold, thereby slowing the rate of growth of money and credit, and deflating the economy. However, a series of financial and natural disasters such as the bank runs of 1922, the Great Kanto Earthquake of September 1923, and the Showa Financial Crisis of 1927 forced the authorities to ease financial conditions periodically, further delaying the international adjustment of the economy. The contradiction between the need for internal deflation to restore competitiveness and restoring growth was only resolved when Finance Minister Takahashi Korekiyo, following the British example of September 1931, ordered the abandonment of the gold standard and the devaluation of the Japanese yen in December 1931. This effectively lowered the Japanese price level (in foreign currency terms) to a level that was at last internationally competitive.

Figure 3.

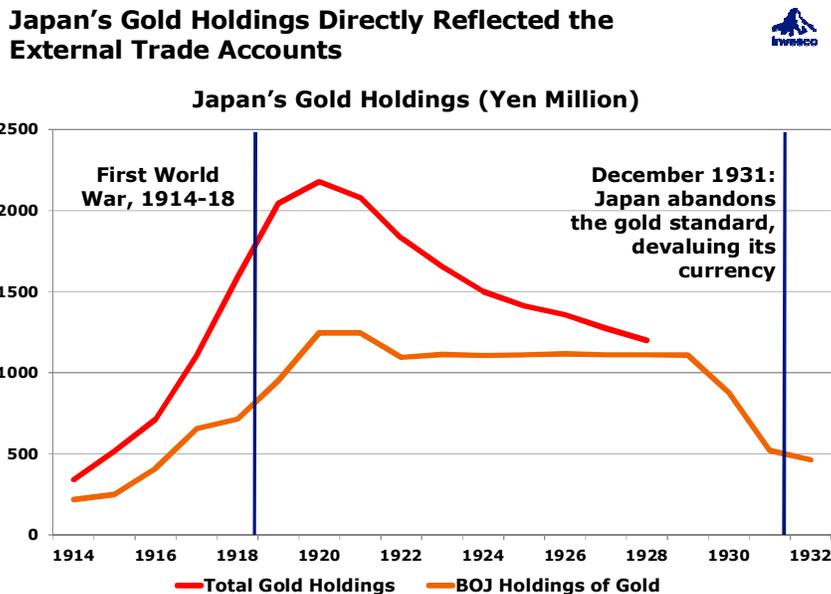


Under the gold standard “rules of the game” countries were obliged to monetise net inflows, so large trade or current account surpluses translated into rapid monetary expansion while large trade or current account deficits had the opposite effect. Of course there were capital flows that might offset or reinforce the trend, but capital flows were substantially smaller in the gold standard era. Consequently we may obtain a reasonably clear idea of the pressures on the Japanese monetary system simply by reviewing the trends on the trade and current accounts of the balance of payments.

Between 1913 and 1918 Japan's exports quadrupled. As Figure 3 shows, Japan's trade account moved to a trade surplus of 551 million yen in 1917. However, it completely reversed over the next seven years to 1924 when the trade deficit hit 866 million yen. This

was the direct effect of prices in Japan being too high or uncompetitive at the pre-war fixed exchange rate. Gradually as prices fell and domestic demand weakened the trade balance began to improve between 1925 and 1931, but the depressed state of agriculture, the high levels of unemployment, and the political and social instability put pressure on the authorities to ease monetary conditions from time to time. Finally in December 1931 Finance Minister Takahashi's devaluation of the yen created the conditions for the current account to shift to surplus and the economy started to expand more vigorously.

Figure 4.



Thanks to the huge surpluses on Japan's external accounts during and immediately after the First World War, Japan's stock of gold increased enormously (Figure 4). From a level of 341 million yen in 1914, Japan's total gold holdings¹ increased to a peak of 2,178 million in 1920, but from then onwards they fell continuously through the entire 1920s until Japan abandoned the gold standard in December 1931, by which time the Bank of Japan's holdings had fallen to 519 million yen. In simple terms, this steady loss of reserves directly reflected the overvaluation of the yen against other currencies, and the relatively weak competitive position that Japan found itself in throughout the decade. The deflationary pressure that the monetary squeeze imposed also explains the slow growth of Japanese economy during this decade, and the growing social and political unrest that blighted Japanese politics during the 1920s.

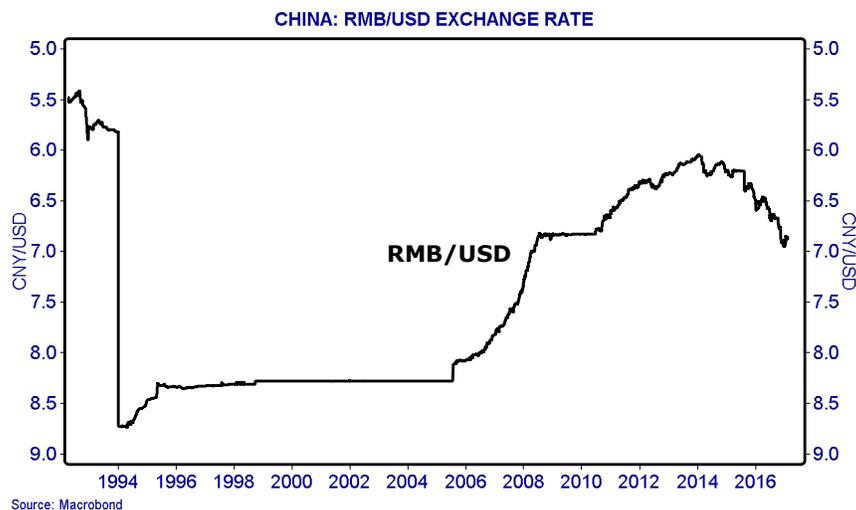
¹ During this period Japan's gold reserves were held both by the Bank of Japan and by the Ministry of Finance (for the government), both at home and abroad. To obtain the full picture of the impact of the overall balance of payments on the stock of reserves, and hence on domestic money and credit, it is important to add the holdings of both official institutions. Nowadays governments and central banks hold reserves mostly in the form of foreign exchange, while gold holdings only form a residual part of total official reserves. Consequently, in a modern economy changes in gold holdings seldom play a significant role in influencing domestic monetary and financial conditions.

Section 2. China's Domestic and External Disequilibria since 1994

Turning to the Chinese parallels with Japan, after the devaluation of the Chinese RMB and the unification of the country's external exchange rates² under then vice-premier Zhu Rongji in 1994, China maintained a fixed exchange rate against the US dollar until July 2005 (see Figure 5). Effectively the country was now on a fixed US dollar standard, just as Japan had been on the fixed gold standard for most of World War 1. The undervaluation achieved in

Figure 5.

**From July 2005 China appreciated the RMB.
However, from 2014 the RMB has been depreciating**

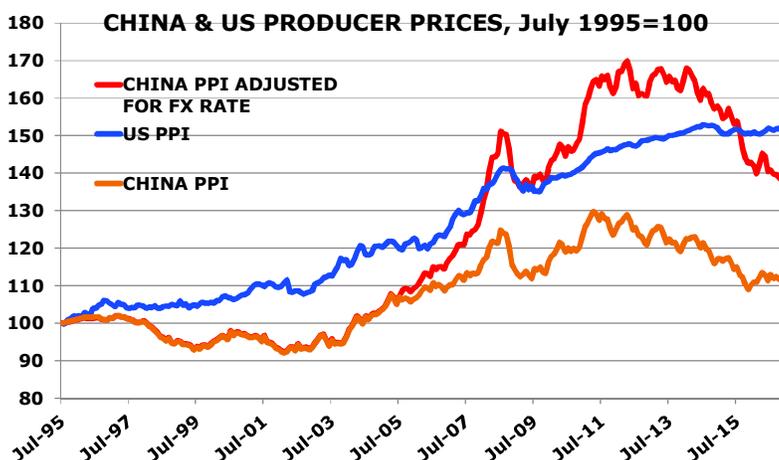


1994 together with the subsequent dramatic double-digit growth rate of the Chinese economy and rapidly growing productivity soon translated into substantial external surpluses. The People's Bank initially aimed to deal with the inflows through the issue of sterilization bonds, starting in September 2002. However, this was not enough to prevent excessive growth of money and credit, and consequently the authorities embarked on a policy of sustained increases in bank reserve requirement ratios (RRRs) and gradual appreciation of the Renminbi (RMB) from July 2005. Even so, the external surpluses on current account continued throughout the period of currency appreciation, which was only reversed from 2014. The recent RMB depreciation along with the steady reduction of China's stock of foreign exchange reserves is highly reminiscent of Japan's experience between 1920 and 1931.

² Prior to December 1994 China maintained an official exchange rate that was frequently devalued and allowed only limited access for commercial trade. The system was buttressed by extensive foreign exchange controls. Consequently there were much higher (weaker) black market rates, together with another rate for FECs (Foreign Exchange Certificates) used by foreigners. The effect of the 1994 reform was to unify all these rates at the black (free) market rate.

Figure 6.

RMB appreciation and rising domestic prices gradually made China less competitive



If China's producer prices are set equal to US producer prices in July 1995, roughly 18 months after the RMB devaluation, we can plot their relative progress until July 2005 when the RMB was revalued upwards. This comparison is shown in Figure 6 above by the brown line (China) and the blue line (US). It is clear that at least on this measure China was gaining competitiveness over most of the period 1995-2005. However, to obtain a fair comparison from July 2005 onwards the Chinese price level must be adjusted by the appreciation of the RMB. This is shown by the red line in the chart.

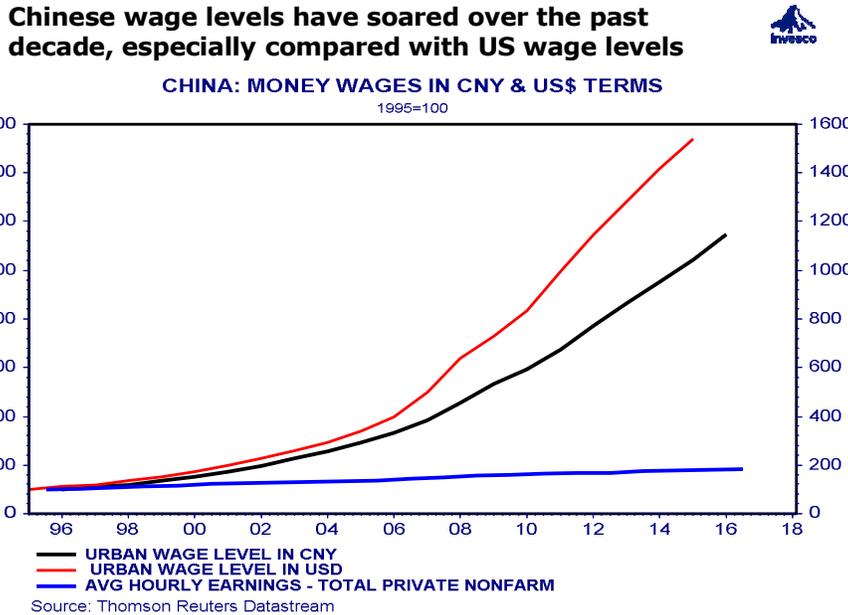
Prior to the Global Financial Crisis (GFC) of 2008-09 the adjusted Chinese price level only briefly exceeded the US price level, but, following a pause when the RMB was held steady against the USD in 2008-10, the adjusted Chinese producer price level began rising, exceeding the US producer price level by as much as 15% by April 2012. This was the result of further RMB appreciation, which resumed after June 2010 until February 2014, together with the effect of higher inflation in China prompted by the RMB 4.5 trillion fiscal and monetary stimulus policy of 2008-2010.

Today the overvaluation of China's producer prices -- expressed in US dollar terms -- has reversed, thanks not only to the depreciation of the RMB since 2014, but also thanks to four and a half years of declining Chinese producer prices between February 2012 and September 2016. However, it is not clear that these two price indices, even adjusted for currency movement, constitute an accurate assessment of relative competitiveness.

One reason why the foregoing price comparison may not be a satisfactory way to compare competitiveness is that a large portion of the Chinese producer price index is accounted for by the price of imported raw materials which are mostly set in international commodity markets, whereas the US index of producer goods is mainly comprised of finished goods prices that are set mostly by domestic demand. For a better measure of relative

competitiveness it would be desirable to employ a price index that combined labour costs with internationally traded goods prices, but such an index is not readily available.

Figure 7.



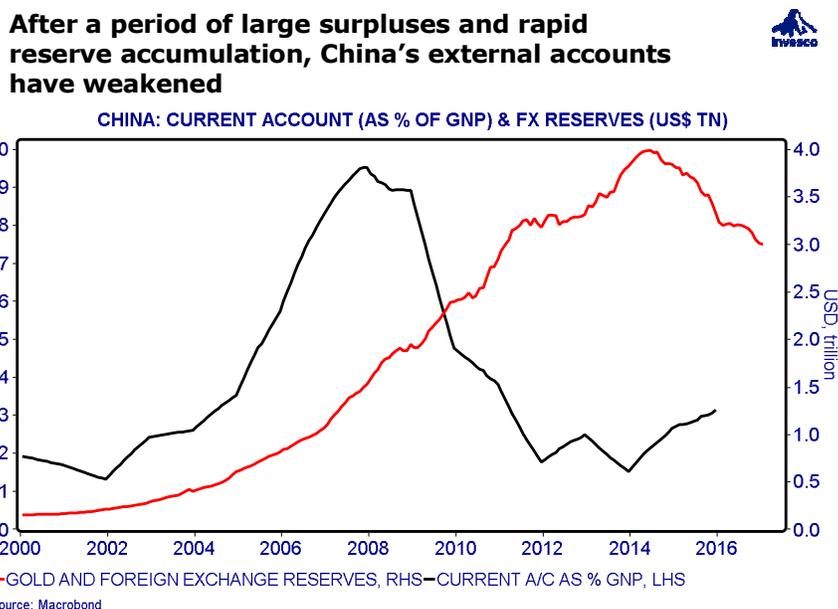
However, we can compare the relative movement of US and Chinese labour costs over the period since 1995. As Figure 7 above shows, Chinese labour costs (the black line) have soared by comparison with US labour costs (shown in blue), even before adjusting for currency movements (the red line). On a superficial level, it is clear that China's cost base has risen hugely compared to the US, and hence the country's relative competitiveness must have been significantly eroded. But the Balassa-Samuelson theory tells us that, given the much greater increases in Chinese productivity compared with the US productivity over the period, Chinese labour costs could have outstripped US labour costs without eroding Chinese competitiveness as much as is indicated in the chart. The question is, how much could Chinese labour costs have risen relative to US labour costs without undermining competitiveness? Given the primitive nature of these data, and the difficulty of gauging the contribution of Chinese labour costs and productivity to overall costs and competitiveness, it would be naïve to expect a definitive conclusion.

Returning to more solid data, China's external surplus on current account, although still positive, weakened from 9.5% of GDP in 2007 to just 1.5% in 2013 and 3.1% in 2015 (as shown in Figure 8). More recently as China's private sector capital accounts have shifted from net inflows to net outflows the overall balance of payments has weakened and the People's Bank (the central bank) has been intervening in the foreign exchange market -- not to keep the RMB from rising, but to limit its depreciation.

In essence this is analogous to the role of the Bank of Japan in the 1920s after Japan's external surpluses disappeared and the country started experiencing current account

deficits and downward pressure on the currency. A key difference is that whereas in the 1920s the Japanese authorities were continuously trying to restore the pre-war fixed

Figure 8.



exchange rate, today China has no such commitment to any particular exchange rate. This should enable China to achieve equilibrium between its internal price level and prices overseas much sooner. However, there are two problems with this view. First, China allowed the external surpluses to build for so long that its countervailing strategies (such as sterilization and sustained appreciation of the currency) created large and intractable distortions in the economy – principally massive excess capacity in many basic industries and heavy indebtedness, both of which will take a long time to overcome. Second, there are distinct limits to China's willingness to allow the exchange rate to depreciate. Together the scale of China's problems, plus the record of the Japanese experience in the 1920s, suggest that resolving China's problem of external disequilibrium will take much longer than just a year or two.

Summary & Conclusion

During the First World War Japan experienced large surpluses on its external accounts which, via monetary expansion, drove up its prices to an uncompetitive level compared with other leading economies such as the US and the UK. Similarly, following China's devaluation of the RMB and exchange rate reunification of 1994, and the adoption of a fixed rate against the USD, China gradually built up huge external surpluses, which continued even after the 2005-14 appreciation of the currency.

For Japan in the 1920s the result of the overvaluation was a decade of financial crises, slow growth, agricultural depression and deflation. Only in December 1931 did the authorities finally abandon the fetish of returning to the pre-war exchange rate, and devalue the yen, allowing Japan's external accounts to return to equilibrium.

Based on the above analysis, China today is faced with essentially the same set of choices as Japan in the 1920s. These can be set out as two broad, polar extremes:

- One option is to maintain the current USD fixed exchange rate (or a stable index level against a currency basket), preserving the status quo in the domestic economy – i.e. widespread state ownership of large-scale enterprises, state direction of credit, and extensive capital and financial controls. Such an adjustment path would imply a long, slow disinflation (relative to foreign economies) with a persistent rundown in the stock of foreign reserves.
- The second option is to move much more quickly to external equilibrium, allowing the external exchange rate to fall in line with market forces, to lift a whole range of controls while re-structuring the state-owned sector and thereby ending the distortions that have built up over the past two decades. Such a strategy would enable China to emerge as a far more market-oriented economy, able to make adjustments to external competitive or technological challenges more rapidly in the future.

In practice, China appears to be adopting a middle road somewhere between these two polar extremes. My view is that China will choose a path closer to the first option (preserving controls, maintaining the state-owned sector, managing the exchange rate and running down the reserves) than the second (free market) option. An intermediate or middle road between the two options will inevitably imply conflicts between means and ends, but it will nevertheless be preferable, from an official Chinese standpoint, to adopting the first option alone.

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