Comment on Yum K.Kwan and Francis T. Lui, "Hong Kong's Currency Board and Changing Monetary Regimes"

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Currency boards are at one end of the spectrum between monetary policy credibility and monetary policy flexibility. They maximize the commitment to stable policy at the expense of all ability to tailor monetary conditions to macroeconomic and financial circumstances. Governments which attach a high shadow price to credibility are attracted to this option. For example, at the beginning of the 1990s, Argentine policymakers, burdened by their country's succession of failed battles with inflation and prepared to take drastic steps to establish their anti-inflationary credibility, resorted to a currency board. Estonia, Lithuania and eventually Bulgaria were attracted to the arrangement by the special monetary difficulties of the transition to the market and, in the first two cases, of proximity to an unstable Russia.

Whether their examples should be emulated by other countries is a contested issue. Although currency boards were advocated for Russia following the disolution of the Soviet Union and for Mexico following its financial meltdown in 1995, in both cases there was also resistance to the proposal, and policymakers ultimately shunned the arrangement on the grounds that they could not afford the sacrifice of policy flexibility it entailed.[2]

Unfortunately, systematic empirical analysis of these issues is difficult. While all countries are special, the circumstances of those that have opted for currency boards tend to be so unusual as to render hazardous all attempts at generalization. Most modern currency boards are so recent or short-lived that there exist only a very few years of time-series data on their operation, affording little opportunity for systematic econometric work.

Here is where the case of Hong Kong's currency board comes in. Hong Kong operated a currency board vis-a-vis sterling from 1935 through the early 1970s, at which point the instability of sterling led it to sever that link. It then floated until 1983, when the turbulence associated with negotiations

with China over the colony's future led to a confidence crisis, to which the government responded by reestablishing the currency board, this time with a peg to the U.S. dollar. Thus, the last two decades divide into a pair of ten-year periods, one of floating and one featuring a currency board, over which the comparative performance of alternative monetary arrangements can be analyzed and compared.[3]

A logical starting point is to compare price, output and interest rate behavior under the two regimes. But because global economic conditions also differ across periods, and a small, dependent economy like Hong Kong is especially sensitive to the external environment, such comparisons tell us little about the performance of Hong Kong's monetary arrangements narrowly defined. To address this problem, Professors Kwan and Lui utilize a variant of the structural vector autoregression methodology pioneered by Blanchard and Quah, distinguishing macroeconomic disturbances, which they attribute to the global environment, from subsequent adjustments, which they interpret in terms of the structure of the Hong Kong economy.

The disturbances identified by the structural VAR approach are intuitively plausible and readily interpretable in terms of historical events. For example, there is a large permanent shock (a "negative supply disturbance") around the time of OPEC II. The 1983 crisis provoked by the negotiations with China shows up as a negative shock with both temporary and permanent components. The "Tequila Effect" in early 1995 shows up as a negative temporary shock. The presumption that temporary shocks should raise prices while permanent shocks should reduce them is not imposed in estimation but is supported by the results, consistent with the authors' interpretation of permanent and temporary disturbances in terms of aggregate supply and aggregate demand shocks, respectively.[4]

Still, one can question whether these estimates are in fact useful for distinguishing the effects of global economic shocks from the operation of Hong Kong's monetary regime. Domestic policy, and not just the external

environment, is a source of shocks; and prominent among the potential sources of domestic disturbances is monetary policy, especially in the 1973-82 period when the Hong Kong dollar was floating. For this reason the attribution of shocks to external factors and responses to internal factors is unlikely to be strictly correct.[5]

Other authors have attempted to distinguish demand shocks of internal and external origin by estimating larger-dimension systems identified by the imposition of additional long-run restrictions.[6] The identifying restrictions required to render this exercise feasible are somewhat arbitrary, and cautious econometricians may be reluctant to impose them. Nonetheless, it is impossible to pass judgement on the operation of Hong Kong's currency board in the absence of such an analysis.

The authors interpret their impulse-response functions in terms of the Mundell-Fleming model. This is a peculiar choice, since Mundell considered the behavior of output and interest rates, taking prices as fixed, while the authors' empirical analysis focuses on output and prices without considering interest rates. It would be more straightforward and informative to describe the results in terms of the textbook aggregate-supply-aggregate-demand model -- that is, in terms of output and prices themselves.

From this perspective, the authors' findings make intuitive sense. They suggest that supply shocks have had a smaller impact effect on prices and a larger impact effect on output in the currency board years. This of course is just what one would expect: shifts in the aggregate supply curve trace out the slope of the aggregate demand curve, and under fixed rates the latter will be very flat in price/output space, domestic prices being tied to foreign prices. Demand shocks, on the other hand, have larger short-run output effects in the currency board years than under floating. Since shifts in the aggregate demand curve trace out the short-run aggregate supply curve, the results suggest that the latter has become flatter over time, reflecting the growth of nominal rigidities.[7] This interpretation is consistent with recent commentary

bemoaning the declining flexibility of Hong Kong's labor market.

An implication is that Hong Kong's decision to move toward very limited exchange rate flexibility (in terms of the U.S. dollar) may have had significant costs in terms of the sacrifice of monetary autonomy. As disturbances have come to increasingly affect output rather than prices, the government has acquired a growing incentive to use monetary policy to offset the effects of shocks, something for which greater exchange-rate flexibility is required. Indeed, many other countries have moved in the direction of greater flexibility, as predicted.[1] Meanwhile, Hong Kong has moved the opposite way, with the government tying its hands precisely as the value of policy flexibility has grown. It would appear that Hong Kong has paid a price for its monetary policy credibility.

In the second part of their paper, Kwan and Lui challenge the view that Hong Kong's currency board is immune from attack because international reserves are five times the monetary base. As the authors note, although reserves are five times the base, M3 is five times reserves. (Here is one indication of Hong Kong's importance as a financial center: bank deposits are 25 times as large as currency in circulation!) It is entirely possible for a shift out of bank deposits, or even a relatively modest shift from Hong Kong dollar to U.S. dollar deposits, to deplete the Exchange Fund of reserves and cause the collapse of the currency peg.

Whether investors have an incentive to run on the Exchange Fund's reserves by shifting out of domestic-currency deposits in favor of U.S. dollar deposits depends on the monetary policy they expect to be pursued in the aftermath of the event. If they think that policy will be more inflationary than before, they have an incentive to attack. This could be the case if they anticipate that the Chinese government will under certain circumstances compel

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[1] As late as 1984 only a quarter of IMF member countries had gone over to floating rates. But by the end of 1994 the proportion operating systems of managed and independent floating rates had risen to more than 50 per cent.

the Hong Kong authorities to run more expansionary policies now that the colony has been returned to their jurisdiction. It could happen if an attack itself heightens the suspicions of the Chinese authorities about the advisability of the currency board arrangement and leads them to plump for a more expansionary policy.[2]

Thus, only if the authorities can credibly commit to continuing to run the same monetary policies as the United States will Hong Kong's currency board be immune from attack. Given the questions that inevitably surround Beijing's policies toward Hong Kong, this is anything but certaint. Just as Argentina's currency board was no guarantee of exchange rate and monetary stability when the Tequila Effect was felt in early 1995 (and the dilemma of having to chose between the stability of the exchange rate and the stability of the banking system was obviated only by the injection of $8 billion of assistance from the IMF), the existence of a currency board will be no guarantee of monetary stability in Hong Kong in the face of significant uncertainty surrounding Chinese policy.

[2] This last-mentioned situation is modelled by Obstfeld (1986).

References

Bayoumi, Tamim and Barry Eichengreen. 1993. "Shocking Aspects of European Monetary Integration," in Francisco Torres and Francesco Giavazzi (eds), Adjustment and Growth in the European Monetary Union, Cambridge: Cambridge University Press, pp.193-240.

Bayoumi, Tamim and Barry Eichengreen. 1996. "The Stability of the Gold Standard and the Evolution of the International Monetary System," in Tamim Bayoumi, Mark Taylor and Barry Eichengreen (eds), Modern Perspectives on the Classical Gold Standard, Cambridge: Cambridge University Press (forthcoming).

Erkel-Rousse, H. and J. Melitz. 1995. "New Empirical Evidence on the Costs of European Monetary Union," INSEE Working Paper no. 9516.

Hanke, Steve H., Lars Jonung and Kurt Schuler. 1993. Russian Currency and Finance: A Currency Board Approach to Reform, London: Routledge.

Obstfeld, Maurice. 1986. "Rational and Self-Fulfilling Balance-of-Payments Crises," American Economic Review LXXVI, pp.72-81.

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2. Prominent advocates of currency boards in these contexts are Hanke, Jonung and Schuler (1993).

3. Admittedly, Hong Kong's experience is special as well. Its currency board is permitted to engage in open market operations, and since 1992 a sort of discount window has been opened to provide liquidity to the banks. Neither feature is typical of currency boards. Moreover, Hong Kong's Exchange Fund holds massive excess foreign currency reserves, including the cumulated fiscal surpluses of the government. (A third of the Exchange Fund's foreign assets come from this source.) Together, these facts blunt the tradeoff that typically exists between a currency board arrangement and lender-of-last-resort operations. I would have liked to see the authors discuss how distinctive they view Hong Kong's currency board arrangements, and how far they think the lessons of its experience can be generalized.

4. Note that this restriction is not imposed in estimation. It is a feature of the Bayoumi and Eichengreen (1993) implementation of the structural VAR approach, but not of the original Blanchard-Quah formulation, specified in terms of output and unemployment.

5. In fact, the authors are not entirely consistent in their attribution of shocks to the external environment and responses to policy. At one point they note that supply shocks are less prevalent in the currency board years and identify this as one of the advantages of a currency board. It is peculiar to identify supply shocks with government policy, however, especially insofar as

they emanate from the monetary sector, in which case their effects should only be temporary. What they are likely to be picking up, obviously, is the effect of the two OPEC oil shocks and the commodity price boom of 1974-75 -- a more turbulent global economic environment prior to the reestablishment of the currency board, in other words.

6. See for example Erkel-Rousse and Melitz (1995).

7. Interestingly, this is precisely what Tam Bayoumi and I (1996) found on the supply side when estimating the same model using annual data for the industrial countries spanning the last 100 years: short-run aggregate curves grow flatter over time, as if nominal rigidities grow more important. But we also found that aggregate demand curves grew steeper, as more and more countries moved in the direction of greater exchange rate flexibility to facilitate the use of demand management policies to offset the effects of supply disturbances, which increasingly affect output as the short-run aggregate supply curve grows flatter.