

GLOBAL IMBALANCES AND THE LESSONS OF BRETTON WOODS

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ABSTRACT. An influential school of thought views the current international monetary and financial system as Bretton Woods reborn. Today, like 40 years ago, the international monetary system is composed of a core, which has the exorbitant privilege of issuing the currency used as international reserves, and a periphery, which is committed to export led growth based on the maintenance of an undervalued exchange rate. Then as now there is the same old core, the United States, but a new periphery, Asia. This view suggests that the current pattern of international settlements can be maintained indefinitely. In particular, there is no reason why the dollar must fall, since there is no need for balance of payments adjustment, and since the Asian countries will resist appreciation of their currencies of the greenback. In this paper I argue that this image of a new Bretton Woods System confuses the incentives that confront individual countries with those that confront groups of countries. It also overlooks important ways in which the world has changed since 1960. This alternative model suggests that if there indeed exists something resembling the Bretton Woods System, it does not have long to run.

JEL Classification: F0; F3.

Keywords: Exchange Rates; Balance of Payments; Bretton Woods.

RÉSUMÉ. Un courant de pensée influent voit dans le système monétaire international et financier actuel une résurgence de Bretton Woods. Aujourd'hui, comme il y a quarante ans, le système monétaire international comporte un noyau dur qui a le privilège exorbitant d'émettre la devise qui sert de monnaie de réserve, et une périphérie qui est vouée à poursuivre un modèle de croissance tirée par l'exportation, fondé sur le maintien d'un taux de change sous-évalué. À cette époque comme maintenant, il y a le même ancien noyau dur, les États-Unis, mais une nouvelle périphérie, l'Asie. Cette analyse suggère que la configuration actuelle des règlements internationaux peut se maintenir indéfiniment. Entre autre, il n'y a

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pas de raison pour que le dollar chute puisque qu'un ajustement au niveau des balances de paiements n'est pas nécessaire et que les pays d'Asie résisteront à l'appréciation de leurs devises face au billet vert. L'article démontre que cette idée d'un nouveau système de Bretton Woods confond les incitations auxquelles sont confrontés les pays pris individuellement avec celles auxquelles fait face un groupe de pays. Cette vision occulte également d'importantes modifications survenues dans le monde depuis 1960. Le modèle alternatif présenté dans cet article suggère que s'il existe effectivement des similitudes avec le système de Bretton Woods, celles-ci ne vont pas durer bien longtemps.

Classification JEL : F0 ; F3.

Mots-clefs : Taux de change ; balance de paiements ; Bretton Woods.

■ INTRODUCTION

An influential school of thought views the current international monetary and financial system as Bretton Woods reborn.² Today, like 40 years ago, the international system is composed of a core and a periphery. The core has the exorbitant privilege of issuing the currency used as international reserves and a tendency to live beyond its means. The periphery, which still has a way to go in catching up to the core, is committed to export-led growth based on the maintenance of an undervalued exchange rate, a corollary of which is its massive accumulation of low-yielding international reserves issued by and denominated in the currency of the center country. In the 1960s, the core was the United States and the periphery was Europe and Japan, many developing countries not yet having been fully integrated into the international system. Now, with the spread of globalization, there is a new periphery, the emerging markets of Asia and Latin America, but the same old core, the United States, with the same tendency to live beyond its means. The main difference between now and then, aside from the names of the players, is the existence of a third bloc, Europe, which has neither the periphery's scope for catch-up nor the reserve-currency country's ability to live beyond its means, which is why it feels under pressure.

This view yields strong predictions. It suggests that the current pattern of international settlements can be maintained indefinitely. The United States can continue running current account deficits because the emerging markets of Asia and Latin America are happy to accumulate dollars. There is no reason why the dollar must fall further, since there is no need for balance of payments adjustment; in particular, the Asian countries will resist the appreciation of their currencies against the greenback. That China has as a rural population of 200 mil-

2. See Dooley, Folkerts-Landau and Garber (2003).

lion underemployed workers yet to be absorbed into the modern sector, something that it can do at the rate of only 10 million to 20 million a year, suggests that it will remain committed to its strategy of export-led growth for a decade and perhaps even two. The current pattern of exchange rates and international payments can be preserved for at least as long.

This way of viewing the pattern of international settlements and the structure of the international monetary and financial system has much to recommend it. For one thing, it encourages us to consider how national balances of payments fit together as interdependent elements of a larger system. Systemic analyses were once commonplace in the literature on the international monetary and financial system; in recent decades they have fallen out of fashion. Proponents of the new view should be commended for reminding us that there is such a thing as the international monetary system and of the fact that the global balance of payments (inclusive of reserve changes) must sum to zero, something that should have implications for how we think about the world.

In addition, this new view helps us to understand how the current pattern of global imbalances arose in the first place. Asian countries have long been committed to policies of export-led growth. Pegged exchange rates and resistance to pressures for revaluation as their economies and current accounts strengthen have been at the center of their development strategies. In pursuing this approach China is following in the footsteps of the newly industrializing economies of East Asia which are themselves following in the footsteps of Japan. There is no question that their accumulation of reserves is a concomitant of intervention in the foreign exchange market to keep their currencies down, which is in turn a concomitant of the strategy of promoting exports as a way of stimulating growth. If this means lower incomes and living standards for the time being, relative to those that could be achieved in the short run if currencies were allowed to appreciate, then this is perfectly fine so long as it translates into faster growth and even higher living standards down the road.

The analogy with Europe in the 1950s and 1960s is direct. I myself have characterized the European social compact in this period as a willingness to trade wage restraint and accept lower levels of consumption in return for faster investment and export growth rates that promised to deliver significantly higher living standards down the road.³ Other authors (e.g. Ohkawa and Rosovsky, 1973) have emphasized the role of the same factors in the high-growth period in Japan. Exchange rates that were increasingly undervalued as the period progressed were integral to this process.

There is no question that the United States plays a unique role in the international monetary and financial system today, as it did 40 years ago. It has been able to run persistent current account deficits without seeing the dollar fall significantly against the currencies of the periphery because the latter are concerned to preserve their position in the US market. This

3. In Eichengreen (1996a).

prompts countries in the periphery to intervene with purchases of dollars in order to keep their exchange rates from appreciating. Their willingness to accumulate reserves is a consequence of expanding economies and expanding trade. It is reinforced by a lesson drawn from the emerging market crises of the 1990s, namely that the world is a risky place and that governments must insure against sudden shifts in financial flows.⁴

In turn, these policies affect the incentive for the United States to adjust its policy mix. It feels less pressure rein in public spending – to choose between guns and butter in the 1960s terminology – because the additional dollar-denominated securities that it is pumping into the world economy are happily absorbed by Asian central banks. The result is less dollar depreciation and less imported inflation. This means less pressure on the Fed to raise interest rates, relieving the central bank of the need to choose between price stability and growth- and employment-friendly monetary policies. The federal government, enjoying low funding costs, can have its cake and eat it too, boosting spending on both defense and social programs without having to resort to tax increases.

So much for praise. In this paper I will argue that this image of a new Bretton Woods System is a misleading way of thinking about the prospects for the international monetary and financial system in the 21st century. It confuses the incentives that confronted individual countries under Bretton Woods with the incentives that confronted groups of countries. It imagines the existence of a cohesive bloc of countries called the periphery ready and able to act in their collective interest. The idea that such a cartel existed in the 1960s is not entirely far-fetched; it was called the Gold Pool.⁵ But history shows that this cartel, like most cartels, proved impossible to hold together when the need was greatest – that is, when collective action was needed for the maintenance of the system. I will argue that the same point applies today: that the countries of Asia constituting the new periphery are similarly unlikely to be able to subordinate their individual interest to the collective interest.

■ HOW THE WORLD HAS CHANGED

The other way that this picture of a new Bretton Woods System misleads is that it underestimates how dramatically the world has changed. First, the members of the periphery are more numerous and heterogeneous today than in the 1960s. Back then we were talking about Europe and Japan. The countries of Europe had a shared historical experience and had already moved down the road toward building institutions to facilitate collective action and transnational governance. In today's Asia, in contrast, stages of economic development and hence policy priorities are less homogeneous. This makes defining the collective interest

4. Insurance that can be obtained by augmenting their reserves.

5. The Gold Pool, made up of Belgium, France, Germany, Italy, the Netherlands, Switzerland, the United Kingdom and the United States, is discussed at further length below. It was a formalization of an ad hoc agreement between the US and other countries to intervene to stabilize prices in the London gold market following the "excitement" created by the 1960 presidential election.

more difficult. Moreover, regional cooperation is more weakly institutionalized than in Europe even 40 years ago. All this renders dubious the assumption that Asian countries will collectively work to maintain the status quo.

Second, shifting out of dollars is only as attractive as the next best alternative. By the mid-1960s US monetary gold reserves had fallen to barely half the \$25 billion reached in the second half of the 1940s. Globally, gold was in inelastic supply. Sterling, the second most important reserve currency, was hardly an attractive alternative. Whether or not central banks liked this situation, it lent stability to the prevailing international system. Now, in contrast, there is the euro.

Third, the readiness of foreign central banks to hold onto dollars and the cohesiveness of their cartel depend on their perception of the reserve-currency country's commitment to maintaining the value of their claims. Under Bretton Woods there was at least a putative commitment to maintain the dollar's convertibility into gold at a fixed price. Now, in contrast, the intentions of US policy makers are more obscure. The prospects for the dollar maintaining its value against foreign currencies are also more dubious than they were in the 1960s to the extent that US external deficits today reflect the country's low savings rate, which does not bode well for the future sustainability of its debt at current price levels. In contrast, US capital outflows in the 1960s reflected high savings rates, which should have had more favorable implications for debt sustainability.

Fourth, the removal of capital controls makes it harder to bottle up private financial transactions which apply pressure to the current constellation of exchange rates. This forces central banks today to undertake more extensive, more costly, and more difficult sterilization and intervention operations in order to maintain the status quo.

Fifth, the liberalization of domestic financial markets means that keeping the exchange rate low and domestic savings high no longer guarantees that additional investment will be centered in the traded goods sector. In the present deregulated financial environment there is a tendency for loose credit conditions to pump up investment in nontradables, notably property, fueling building booms and heightening financial fragility. Asian governments are increasingly aware that the current strategy entails these risks, creating an incentive to modify it sooner rather than later.

The final point is that Asian policy makers are not ignorant of this history. They understand that the world has changed in ways that diminish the attractions of systematic undervaluation designed to promote export led growth. This makes it less likely that they will blindly repeat the policies of the past.

■ THE COLLECTIVE ACTION PROBLEM

Bretton Woods was a compromise between competing visions of the post-World War II monetary order. For present purposes it is sufficient to adopt the conventional distinction

between the British view and the US view, or between the Keynes Plan and the White Plan, although in reality there were a number of additional visions represented at the 1944 meeting convened in Bretton Woods, New Hampshire. The US attached priority to stable money, understandably given the monetary turmoil that the country had endured in the 1930s, while the British attached priority to monetary room for maneuver, again understandably given how the Bank of England had been inhibited from adapting policy to the needs of the economy in the 1920s. The compromise was one in which gold was made the ultimate anchor of the Bretton Woods System but subject to qualifications that enhanced the autonomy of central banks. The United States accepted, indeed embraced, the obligation of paying out gold at \$35 an ounce. But this obligation was extended only to its official foreign creditors, not to private market participants. And other currencies could be pegged to the dollar rather than gold.

The parallels with our current international monetary system will be evident. While the Bretton Woods System was nominally gold based, from the start it was really a gold-dollar system, and from 1968 with the creation of the two-tier gold market, and especially from the summer of 1971 with the closure of the gold window, it was effectively a dollar standard. Given the inelasticity of global gold supplies, dollars provided essentially the entire increase over time in international reserves, other currencies playing a negligible role. Agreement to create Special Drawing Rights in 1968, which took several additional years to operationalize, came too late to change this fundamental fact.⁶

While countries other than the United States could only acquire additional reserves if the US ran balance of payments deficits, those deficits created discomfort for a number of reasons. Its status as the reserve-currency country evidently allowed the United States to live beyond its means: the US could import foreign merchandise, acquire foreign companies, and engage in foreign military adventures all at the same time. Charles de Gaulle and many of his countrymen found these last two privileges particularly objectionable. Pressure on the dollar price of gold and official gold losses were a chronic preoccupation of US policy makers in the 1960s, but their existence did nothing to assuage complaints that the US had an "exorbitant privilege" by virtue of the dollar's exceptional position under Bretton Woods.

Another reason why large stocks of dollar reserves were uncomfortable for foreign central banks and governments was uncertainty about whether dollars would maintain their value. If the dollar was devalued against gold or other currencies, foreign central banks would incur capital losses. If they sought to protect themselves by swapping dollars for gold, they might precipitate the very crisis of which they were increasingly concerned. If the United States attempted to defend the dollar by adopting more restrictive monetary and fiscal policies or, more likely given domestic political imperatives, resorting to protectionism to curtail the demand for imported merchandise, foreign economies would lose access to the major export market on which they were so dependent. These same considerations rendered foreign gov-

6. The first allocation of SDRs was only issued in 1970-72.

ernments reluctant to revalue against the dollar, despite their relatively rapid growth, rising competitiveness, accretion of reserves, and reservations about US balance of payments deficits.

All this has a contemporary ring. Then as now, other countries welcomed their ability to acquire dollar reserves, and they valued their access to a buoyant US export market. They were reluctant to revalue for fear of how this would affect both the prospects for export-led growth and the stability of the international monetary and financial system. Discerning no alternative, they resorted to a variety of ad hoc measures to keep the system running for more than a decade. One possible implication is that contemporary policy makers see no alternative to doing the same.

At the same time, the 1960s differed in important ways. For one thing, in contrast to the current position, the US trade balance and current account were in substantial *surplus* all through the period. The US trade balance had been in surplus continuously since World War II. The US current account was similarly in surplus every year from 1954 to 1971 (when the combination of leads and lags and J-curve effects did it in), with the single exception of 1959. The US current account continued to strengthen through the first half of the 1960s until mounting US military expenditure abroad led to the progressive diminution of the surplus balance. But a surplus there was.

Throughout this period, then, the United States was a net investor in the rest of the world. Contemporaries were conscious of the fact; these were the very years when critics in France and elsewhere became aware of the growing presence of US-based multinational corporations and worried that the United States was buying up their assets on the cheap. To some extent this foreign investment was a natural consequence of America's status as banker to the world, a mantle she had taken over from Britain. As the country with the deepest, most liquid and most sophisticated financial markets, the US provided financial intermediation services to the rest of the world by importing short-term capital and exporting long-term capital. Foreigners were attracted to the liquidity provided by US treasury bills and bank deposits, but they also needed the long-term investments of US-based multinational corporations.⁷ With a comparative advantage in financial intermediation, the country had a natural tendency to provide maturity transformation services, as emphasized by authors like Charles Kindleberger.⁸ There was an unfortunate tendency to confuse what was a competitive strength in the provision of financial-intermediation services with problems of inadequate international competitiveness. That tendency was aggravated by the publication of balance of payments accounts using concepts like the basic balance, which excluded short-term capital flows from the balance-of-payments accounts while including long-term flows.

7. Solomon (1982) refers to French views of US foreign direct investment as "schizophrenic." Even while opinion leaders worried about U.S. dominance of the French economy, practical policy makers recognized the fundamental need for long-term US investment.

8. See Kindleberger (1965).

But that the United States, the country with the deepest and most liquid financial markets, possessed a comparative advantage in exporting financial services was no guarantee that this would remain the case. While the US had a head start in the development of financial markets, given the draconian controls imposed by other countries in the wake of World War II, increasingly well-developed bank intermediation provided an alternative to securitized finance. Moreover, financial liberalization and financial development were ongoing. Catch-up in finance was simply one aspect of the broader catch-up process in the OECD over the quarter century following World War II.

And, as Peter Garber has noted, if accelerating inflation raised the danger of capital losses on US investments, other countries would find it less attractive to obtain these maturity-transformation services by investing in liquid bank deposits and treasury securities in the United States and receiving less liquid foreign direct investment in return.⁹ At some point, the terms of trade would be sufficiently unattractive that short-term capital inflows might stop and even reverse direction. If long-term flows were slower to reverse, as contemporaries assumed, the result could be a crisis for the United States whether or not the country had been serving as banker to the world.

Still, from the present perspective, the composition of capital flows is a subsidiary concern. The key point is that the net direction of flows was strongly outward. Domestic savings exceeded domestic investment all through the 1960s (albeit by a small margin in 1968 and 1969). The excess savings could be invested abroad in earning assets – the foreign branch plants of US-based corporations, foreign government securities, and a variety of other foreign assets – the interest and dividends on which would represent a credit item on the balance of payments down the road. In the event, these expectations of future credits did not suffice to reassure the markets. But imagine how much worse things would have been – how much more quickly confidence in the system would have ebbed – had there existed in addition other distortions depressing US savings rates and resulting in current account deficits.

In retrospect, it is striking for how many years jerry-rigged solutions kept the system afloat. Determining whether this should be regarded as promising for future efforts to keep the current “non-system” afloat requires examining the motives and tactics of officials in more detail. Although the reallocation of monetary gold from US coffers to those of the rest of the world was a fundamentally healthy phenomenon – circa 1947 the US had possessed an unsustainably large 70 per cent of the world total – by the end of the 1950s the US share had fallen to less than 50 per cent and the trend was viewed with alarm. There had been a particularly large drop in US gold reserves in 1958 in the aftermath of the Suez crisis. The shift of the current account from surplus to deficit in 1959 created worries of more deficits to come. For much of 1960, the international monetary intentions of the Democratic presi-

9. Garber (1993), 470-474.

dential candidate, John F. Kennedy, were obscure; his emphasis on “getting the economy going again” did not reassure dollar bears. Although Kennedy asserted even before the election that he had no intention of devaluing the dollar, there was still a tendency on the part of market participants to reason by analogy with 1933, the last time that a Democrat had taken over from a Republican as president, and when one of the new president’s first actions had been to raise the dollar price of gold. Thus, prices in the London gold market shot up in October 1959 to \$40 shortly before the US election. Only concerted intervention by European central banks, led by the Bank of England, brought them back down.

Any divergence between the official US and London market prices of gold created a temptation for central banks to buy gold from the United States for \$35 and sell it on the London market at a higher price. Their ability to do so was limited only by their liquid dollar reserves. From a collective standpoint doing so might be undesirable insofar as it depleted US gold reserves and cast doubt over the country’s commitment to convert gold into dollar at a fixed price. But for the individual central bank there was an incentive to engage in such conversions before the gold window slammed shut, as ultimately happened in 1971, leaving those who had exercised restraint without options. This created an obvious problem of collective action.¹⁰

This is the context in which the Gold Pool was created in 1961. The Gold Pool was an arrangement whereby central banks sought to share the cost of maintaining the London price of gold at \$35 an ounce rather than depleting US gold reserves.¹¹ It encouraged collective action by establishing an understanding of how the costs of these operations would be divided – that is, of what share of the gold that needed to be sold in London in order to stabilize the market price would be provided by each participating central bank.

But foreign central banks were not prepared to continue sharing these costs indefinitely. Even in its heyday, central banks other than the Fed provided barely more than a third of the gold reserves sold into the pool.¹² In principle, the Gold Pool shifted only some of the pressure of maintaining the \$35 gold price in London away from the United States. And, in practice, other central banks were still free to offset their sales into the pool with purchases from

10. Private investors, in contrast, could not undertake these arbitrage operations directly, but many of them had the right to buy gold on the London market, in anticipation of the fact that its price would rise if US gold reserves were exhausted. In addition, foreigners could “put” their dollar holdings to their own central banks by exchanging dollars for the local currency to avoid the losses that would follow if the dollar was devalued. By enlarging the dollar positions of European central banks, this raised the stakes for countries seeking to exercise individual self-restraint in the collective interest. As Garber (1993) notes, it is surprising that contemporaries focused on liquid foreign dollar holdings to the exclusion of liquid dollar holdings in the United States. In principle, there would seem to have been myriad ways in which US residents could have used their domestic balances to buy gold or foreign currencies in London. Whether their failure to do so on a larger scale reflects the operation of the Interest Equalization Tax, the Buy American Program or some other device is unclear. I return to this below.

11. The actual intervention price was \$35.20, the official \$35 US price plus the costs of shipping and insurance of getting gold to London.

12. It is revealing that the US share was especially high as the arrangement drew to an end and other central banks, notably the Bank of France, grew increasingly reluctant to participate in the system. Solomon (1982) notes how the US had to airlift gold to London using Air Force planes in order to keep the Gold Pool afloat at the end of 1967.

the US authorities. As a group, members of the pool other than the US. actually added to their gold reserves in this period, while the US was forced to make additional gold sales outside the pool in roughly matching amounts. This may have been inconsistent with the spirit of the cartel agreement, but there was nothing that the US could do about it. France was the most blatant case: it bought \$884 million of gold from the United States in 1965, despite running an overall balance of payments surplus of only \$619 million (as measured by the total increase in its reserves). In 1966 it bought \$601 million of gold from the US despite a total increase in reserves of only \$390 million.¹³ And the more gold that France acquired from the United States, the greater was the temptation for other central banks to do the same.¹⁴

In part the incentive problem arose from the fact that there did not exist a limit on the obligations of other central banks: there was no adjustment mechanism that guaranteed to return prices in the London market to the official price of \$35 an ounce and thereby allow the Gold Pool to be disbanded.¹⁵ France demanded a more contractionary US monetary policy as a *quid pro quo* for its continued participation. When this was not forthcoming, it withdrew, and the pool collapsed.

There followed a "Gentlemen's Agreement" in which central banks promised not to convert their inherited dollar balances but remained free to convert any additional dollars they accumulated starting in 1968. But since there was no other way by which their need for additional reserves could be satisfied, the writing was on the wall. In the short run, the US could replenish its reserves by attracting capital and purchasing gold from France, where the events of May 1968 created uncertainty about future policy. But this was only a temporary respite. The holes in the Gentlemen's Agreement became gaping in 1970, when Belgium and the Netherlands exchanged dollars for gold, Germany signalled its desire to do likewise, and France indicated that it would demand gold for dollars in order to make a repayment to the IMF. The last straw came on 13 August, when Britain requested gold. The gold window was then shut in short order.

13. In the summer of 1967 it discontinued sales into the pool, a fact that became known later in the year (see below).

14. According to Meltzer (1991), the Gold Pool never worked as an effective cartel, these replacement purchases of gold by European central banks functioning in the same manner as surreptitious oil sales by members of the OPEC cartel.

15. Robert Solomon, then working for the Federal Reserve Board, recognized this problem, and proposed linking the continuation of the Gold Pool with the creation of a new reserve asset (along the lines of what eventually became the SDR). See Solomon (1982), 115-116. As it happened, the collapse of the Gold Pool and the creation of a two-tier gold market in 1968 with one price (the London market price) for private transactions and a second price (\$35 an ounce) for official transactions did help to restore equilibrium after a fashion. The rise in the market price created an incentive for South Africa to expand its gold production and sales, eventually driving the market price back down to \$35. But this response occurred only after the official and market prices of gold were decoupled, and it took a considerable period of time to operate. This was precisely how the maintenance of price stability was supposed to work under the classical gold standard. (For a modern statement of the mechanism, see Barro, 1979.) Under the classical gold standard as well, the problem was that the induced response of the gold mining industry took a considerable period of time to operate (Eichengreen, 1996b). In the meantime, the signals sent by the divergence of the two prices reminded central bank of the incentives to hedges their bets.

■ AN ALTERNATIVE SCENARIO

The question is then how this situation will play out from here. The United States has little incentive to precipitate the adjustment; to the contrary, it is happy living beyond its means. Rather, adjustment will have to be forced by Asia. Eventually there will be a recognition that policies of export-led growth have reached the point of diminishing returns. This recognition will entail the observation that the traditional traded goods sectors are no longer the exclusive locus of productivity- and growth-promoting externalities and that activities like software development, back-office services, and financial intermediation are also sources of positive spillovers. Growth will thus require balanced investment in nontraded and well as traded-goods sectors. Asian countries will have to invest more in higher education. They will have to invest more in housing and urban amenities to make themselves attractive to knowledge workers.

Doing so will require allowing the real exchange rate to rise. The obvious way of allowing the real rate to rise without compromising the commitment to price stability is to curtail intervention in the foreign exchange market. Once one or more Asian countries acknowledge that export-led growth is encountering diminishing returns and curtail their intervention, the cartel of central banks that had been supporting the dollar and preventing Asian currencies from rising will begin to fray. One can imagine a gradual migration out of dollars and into alternative reserve assets like that which occurred after 1968. Given the low yields on yen-denominated assets, the euro is the obvious direction for such migration. In addition, the commitment of Asian governments to encourage the development of a regional bond market may lead them to allocate a growing share of their reserve portfolios toward assets denominated in one another's currencies.

Inertia is still the single strongest determinant of the composition of central bank reserve portfolios. Central banks are buy-and-hold investors; they rarely manage their reserve portfolios actively and have a high tolerance for capital losses. It is thus reasonable to anticipate that Asian central banks will not dump all their dollars at once. But there is good reason to think that the adjustment will accelerate with the passage of time.

B. E.

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