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RESERVE ACCUMULATION IN ASIA AND ITS IMPACT ON THE ECONOMIC AND MONETARY UNION AND THE EURO

Abstract: The accumulation of reserves is an essential element of economic policies pursued within Asian countries, which influences the external imbalances and the global economy. For the EMU, accumulation and exchange rate policy of Asian countries has adverse effects, as it influences the euro and competitiveness of the European manufacturing sector. In general – the lesser extent of exchange rate flexibility, the bigger appreciating pressure on the euro. For the European Central Bank, it generates dilemma on the rationality and effectiveness of intervention policy. Another channel, through which Asian reserve policy influences the euro is the currency structure of reserve portfolio, and the extent to which the euro substitutes the dollar as reserve currency. The conclusion is, that it may make sense to distinguish between motives of reserve accumulation.

Key words: reserve accumulation, exchange rate policy, global imbalances.

1. Introduction

The article tackles the problem of reserve accumulation in Asia and its consequences for the economy of the Economic and Monetary Union (EMU), the exchange rate of the euro and the role of the euro in international use.

The author examines two related issues. First, it examines the motivations behind reserve accumulation in Asia. The article tries to answer the question whether it makes any difference what the motivation of reserve accumulation is for the external consequences of this policy. It also enables us to predict about the sustainability of this policy. Different motivations may involve different future reserve behavior in Asia and may carry different long term implications. Second, it examines the consequences of Asian accumulation and exchange rate policy for the EMU and the euro. It examines the extent to which this consequences have been adverse. The article – in response to the main thought of the conference – while focusing on the external dimension of the reserve and exchange rate policy, is limited to the EMU, thus omits the consequences of the policy for the USA in the context of the phenomenon of the global imbalances.

2. The scale and channels of reserve accumulation

Since the mid 1990s in the global economy there has been an unprecedented accumulation of official foreign reserves. Global foreign exchange reserve holdings have risen from around 1.2 trillion Special Drawing Rights (SDR) in the late 1990s to more than 4 trillion SDRs in 2007. This spectacular surge in official reserve holdings has been concentrating in Asia (Japan and Asian emerging market economies, mainly China) and Eastern Europe (mainly Russia).[1] The top two reserve holders, Japan and China, accounted for about half of the total world accumulation in 2002-2004, and currently hold around 40% of the total world stock of reserves.[2] The share of world foreign reserves held by Asian economies grew from 46% in 1995 to 64% in 2005. As a result, in the end of 2005, eight Asian monetary authorities were among ten largest reserve holders, with seven of them owning more than USD 100 billion.[3]

Table 1. Foreign exchange reserves of countries with the largest holdings: 1995-2005

Reserve-accumulating countries	1995	1996	2000	2001	2002	2003	2004	2005	% of GDP	CC	Regime (*de jure*)
1. Japan	172.4	207.3	347.2	387.7	451.4	652.8	824.3	823.1	17.7	N	IF
2. China	73.6	105.0	165.6	212.2	286.4	403.2	609.9	769.0	37.0	Y	MF
3. Taiwan	90.3	88.0	106.7	122.2	161.7	206.6	241.7	253.7	78.2	N	IF
4. Korea	–	29.4	96.2	102.8	121.4	155.3	199.1	205.9	29.1	N	IF
6. Russia	14.4	11.3	24.3	32.5	44.0	73.2	120.6	155.7	20.7	Y	MF
7. India	–	–	36.8	44.9	65.7	95.2	124.7	136.9	18.9	Y	MF
8. Hong Kong	55.4	63.8	107.6	111.2	111.9	118.4	123.6	122.0	75.1	N	CB
9. Singapore	68.8	77.0	80.4	75.8	82.3	96.3	112.8	115.5	104.4	N	MF
10. Malaysia	22.9	25.1	28.6	29.6	33.3	43.5	58.2	75.8	55.5	Y	MF
11. Mexico	15.7	16.7	36.2	40.0	45.8	55.7	61.0	68.6	15.0	N	IF
12. Brazil	51.8	60.1	33.0	35.9	37.8	47.1	54.0	54.8	8.8	N	IF
13. Algeria	2.0	4.2	11.9	18.0	23.1	32.9	39.4	51.7	52.9	Y	MF
14. Thailand	–	–	32.5	33.2	38.1	42.1	49.1	48.3	29.7	N	MF
15. Norway	21.1	25.2	26.7	22.2	30.7	35.9	42.7	42.7	17.1	N	IF

And to compare: Other (non-accumulating) reserve holders (with ranking):

5. Euro area	277.4	306.8	218.6	208	215.8	188	179	173.2	–	–	–

CC – capital controls: N – no, Y – yes; IF – independent floating; MF – manage floating; CB – Currency Board.

Source: *The Accumulation of Foreign…*

[1] F. Breuss, W. Roeger, J. Veld, Global impact of a shift in foreign reserves to euros, *European Economy, Economic Papers* 345, November 2008.

[2] *The Accumulation of Foreign Reserves*, ECB, Occasional Papers Series, No. 43/2006.

[3] *Ibidem*.

The reserves have been predominantly denominated in U.S. dollars, reflecting the role of the dollar in international transactions and the liquidity of the U.S. bond markets. Many economies in Asia have accumulated reserves by means of running current account balance of payments surpluses. Interestingly, net capital inflows have frequently allowed the reserve accumulation to exceed the current account surplus.[4] Dividing the biggest Asian accumulators according to the channels of reserve accumulation, two distinct groups emerge:

– current account surplus countries (Malaysia, Singapore),
– countries that experienced both current and capital account surpluses (China, India, Korea, Taiwan).[5]

3. The motives of reserve accumulation

While discussing the motivations behind reserve accumulation in Asia, two main explanations have emerged in the literature:

1. "Precautionary motive" (self-insurance) – accumulating international reserves is a way of reducing the risk of future crises and of minimizing the need to turn to the International Monetary Fund (IMF) if crises occurred. The need to self-insure against future crises is the effect of financial crises that occurred in the 1990s and early 2000s.

2. "Intervention motive" – attempts at influencing the exchange rate (sometimes referred to as manipulation). It reflects mercantilist modes of thought – defending undervalued exchange rates through reserve accumulation is a means of export-led growth strategy.

Some argue that certain features of the domestic financial systems of Asian Emerging Market Economies (EME) are likely to have played a role. Such characteristics relate mainly to:

– their underdeveloped local financial systems, entailing difficulties in properly channeling domestic private savings to investment as well as inefficient and/or costly hedging markets;
– the resultant tendency towards dollarization of official and/or private cross-border assets on the part of certain creditor EMEs;
– from a macro viewpoint, an excess of domestic savings over investment driven by either a savings glut (China) or an investment drought (other Asian emerging market economies).[6]

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[4] For example, around 75% of China reserve accumulation in 2003-2004 was financed by capital inflows, not China's current account surplus.

[5] J. de Beaufort Wijnholds, L. Sondergaard, *Reserve Accumulation. Objective or By-product?*, ECB, Occasional Paper Series, No. 73/2007.

[6] *The Accumulation of Foreign…*

According to this view, the phenomenon of reserve accumulation in Asian EMEs stems from the asymmetry – those countries have become major players in international trade, but are still underdeveloped from a financial angle.

There is no consensus in the literature about which motive has been predominant in case of Asian countries. The dominant view is that while Asian countries initially (after the 1997/98 financial crisis in their region) were seeking self-insurance through reserve accumulation, several of them are now clearly engaged in large-scale foreign exchange intervention aimed at keeping their exchange rates at competitive levels[7]. One must agree with the view of ECB, that the large reserve accumulation by many EMEs in Asia should be considered mainly as the outcome of the domestic policies pursued by these countries, and as a direct consequences of globalization.[8] In spite of the fact that since 2005 China has gradually introduced some flexibility in its exchange rate regime, it continued to make very substantial additions to its reserves.

Japan – the only developed country in the group of Asian accumulating countries – must be analysed separately from EMEs. Japan's reserves, which soared form USD 287 billion in 1999 to around USD 840 billion at the end of 2005, but have shown little change since then, reflect massive interventions aimed at putting the brakes on yen appreciation. The main consideration was to combat deflation and stagnant growth through the channel of strong export growth. Since the Japanese economy started to recover around late 2004, further intervention in the foreign exchange market has been absent.

While accumulating foreign reserves for the reason of self-insurance may be reasonable form the country's perspective, it is globally inefficient relative to alternative arrangements, such as establishment of credit lines, reserve-pooling arrangements, swap lines or other forms of insurance.[9]

If the main motive behind the reserve accumulation is the precautionary one, we may predict that the degree of risk adversity should decline with time, and, as a consequence, reserve holdings in the long term should be expected to fall. This can happen on the condition that certain multilateral (or regional?) mechanisms (as depicted above) enhancing financial insurance form international sources for the countries are adopted.

However, the financial crisis experience (2007-2009) may change this optimistic view. The crisis can be read by many countries as suggesting that more rather than less reserves are desirable.[10]

Similarly, the policy of reserve accumulation as the indirect consequence of other policies (export-led economic growth strategy), may be a reasonable strategy from

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[7] This view is expressed in: J. de Beaufort Wijnholds, L. Sondergeerd, *op. cit*.

[8] *Ibidem*.

[9] O. Blanchard, G.M. Milesi-Ferretti, *Global Imbalances: In Midstream?*, IMF Staff Position Note, SPN09/29, December 2009.

[10] *Ibidem*.

the country's perspective, but it comes in effect at the expense of other countries. From a global perspective, a strategy aimed at keeping exchange rates artificially low contributes to sustaining large global current account imbalances. In this case, one may expect, that as long as the policy is maintained, reserves will tend to build up. The resistance of Asian economies to exchange rate appreciation, and, hence, supported reserve accumulation in these countries, stems from their high degree of trade openness (90% on average in Asia). This implies a higher pass-through of exchange rate changes into domestic prices, and hence a stronger deflationary bias in the event of currency appreciation. Additionally, in case of China, demographic factor is very important in explaining the rationality of export-led growth strategy. All of these may be arguments for future reserve accumulation policy in Asia. Even here there is an offsetting force since, if not sterilized, the reserve implications of defending an undervalued nominal exchange rate will result in domestic monetary expansion (as foreign currencies are bought by the authorities with domestic currency) and this may lead to inflation, an appreciation in the real exchange rate, and a loss of competitiveness which works against continuing reserve accumulation.[11] Of course, through sterilization policy a country can avoid the inflationary cost of reserve accumulation. In fact, most Asian economies sterilize reserve purchases. However, the costs of sterilization grow with the passage of time, so in the long run sterilization policy becomes costly. There is also a risk of protectionist action initiated by trading partners.

The conclusion that emerges is, that in terms of short run behaviour, the motivation behind reserve accumulation may be relatively unimportant. But in the long run, different motivations may offer slightly different predictions about future consequences for the global, and Eurosystem, economy. Accumulating reserves form precautionary motive may be less persistent. However, the decumulating force is subject to mechanism of liquidity provision elaborated on multinational or regional level and behavioral pattern in post-crisis times.

4. The interlinkages between reserve and exchange rate policy in Asia and the economy of EMU and ECB monetary policy dilemma

The criticism of the policy of reserve accumulation stresses the costs it imposes on other countries and globally – on the smooth functioning of the international monetary system. In the following section, the article focuses on the EMU.

The first cost relates to the rigidity of the Asian exchange rate and the reluctance of Asian countries to allow their currencies to float freely.

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[11] G. Bird, A. Mandilaras, Reserve accumulation in Asia. Lessons for holistic reform of the international monetary system, *World Economics* 2005, Vol. 6, No. 1.

By maintaining its currencies undervalued in relation to USD, the Asian countries have neutralized the effects of dollar depreciation on their trade balance with the U.S. and have gained competitiveness in relation to other countries and regions, such as the EMU. By pegging to the USD, Asian currencies have depreciated in terms of the euro. Thus, the effect of depreciation of the USD and maintaining the peg to the USD in Asian countries is appreciation of the euro, both in relation to Asian countries and USD. Between 2002 and 2008, the euro appreciated steadily against the USD, in both nominal and real terms, which have stirred the debate among policy-makers about whether the European Central Bank (ECB) should pursue policies to stabilize, and curtail a rise in the euro. In this period, there were episodes of strong political pressure on the ECB to curtail the euro's appreciation.[12] The main argument for stabilizing the euro is that the relative appreciation of the Euro may have had desindustrialising effects as European producers have found it difficult to compete against Asian imports and may have therefore accentuated relatively slow European economic growth. The negative consequence of exchange rate and reserve policy in Asia on aggregate demand and economic activity in Europe is especially detrimental, as alternative growth strategies associated with expanding aggregate demand in Europe are constrained by the Stability and Growth Pact.[13]

L. Couthino, using simulations, finds that in many cases, it is not optimal for the ECB to try to offset euro appreciation. The basic results are driven by the degree of substitutability among US, euro area and Asian goods, and the degree of product market competition within each market. The conclusions are as follows:

– if the degree of intra-region competition is very low, the standard Mundell-Fleming substitution effects of foreign currency depreciation dominate, and the ECB has an incentive to stabilize the exchange rate to re-capture world trade and improve its welfare,
– if intra-region competition is stronger than competition between regions, a monetary expansion by the ECB to stabilize the value of the euro may be "Beggar-thyself". Stabilization in this case will only be worthwhile if the degree of competition between regions is relatively close to the degree of competition within regions.[14]

The exchange rate movements between the euro, the USD and Asian currencies must be examined in broader context, namely in the context of global imbalances.

The tolerance of USD depreciation shows that Europe has allowed itself to bear the brunt of international economic adjustment, and thereby relived at least some of the strains on the U.S. current account. An important question emerges: is there another channel of adjustment in the global imbalances but through exchange rate of the euro adjustment in the absence of the flexibility of Asian exchange rates?

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[12] For example, see *Financial Times*, 2 October 2007.

[13] G. Bird, A. Mandilaras, *op. cit*.

[14] L. Couthino, Exchange rate policy: the euro area, the United States and Asia, *International Finance* 2009, Vol. 12, No. 3.

In the discussion of global imbalances, Lane and Milesi-Ferretti analyze different adjustment scenarios, among others "the policies scenario". They conclude that structural policies in Europe can help mitigate the impact of the adjustment, and that flexible exchange rates in Asia do imply a smaller real exchange rate appreciation in the EMU.[15] This view expresses a common agree that without enhancing exchange rate flexibility in case of Asian currencies, international monetary and economic relations will be tense.

Another aspect of the reserve accumulation which has important consequences for the EMU and the euro, is the demand for euro as reserve currency. Some fear that a diversification of reserve towards adding more claims in euro may have adverse consequences. Such a development would cause interest rates to rise and increase the volatility of major exchange rates.[16]

The sharp diversification of reserve portfolio would translate into USD depreciation. Many commentators and also European exporters fear that a shift of foreign reserves from USD to euro could deteriorate their competitiveness on USD markets. The diversification of foreign reserves towards euro could increase pressure on the ECB to intervene to support the USD against the euro.

Interesting results stem from empirical studies presented by F. Breuss *et al*.[17] Focusing on the official foreign reserve holdings, the authors concentrate on the quantification of a realistic shift in these reserves from USD to euro both in the Asian countries and across the world. The authors study the global macroeconomic impact of an equalization of the ratio of the composition of foreign reserves of dollars and euro via numerical simulations. It is assumed that this shift happens gradually over the next 10 years increasing the share of the euro by 20 percentage points from 25 to 45% of total official reserves and the fall of the dollar share by 20 percentage points to 45% of total. The interesting result is that this portfolio switch does not result in the suspected big change in the dollar/euro exchange rate in the long time horizon. The shift in reserve composition leads initially to an appreciation of the euro, but a depreciation in the long run. However, if private agents would also shift their preferences and private portfolios towards the euro, then the effects would be many times larger. Nevertheless, there can be a marked macro-economic impact in the euro area (an increase of real GDP) and in the U.S. (a decline in the overall activity) due to persistent real interest rate effects. Thus, the exchange rate movements are negligible as compared to the real benefits from the euro playing a larger role as global reserve currency. The magnitude of these effects depends crucially on the elasticity of substitution between domestic and foreign assets.

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[15] P.R. Lane, G.M. Milesi-Ferretti, *Europe and Global Imbalances*, IMF Working Paper, No. 07/144, 2007.

[16] J. de Beaufort Wijnholds, L. Sondergaard, *op. cit*.

[17] F. Breuss, W. Roeger, J. Veld, *op. cit*.

According to the statistics, the share of the euro in official reserves is gradually increasing, but it does not happen in the case of Asia.[18] This is related to the foreign exchange regimes adopted in several Asian countries, often characterized by *de facto* pegs against the USD, and the composition of their external trade, dominated by the links with the U.S. and the dollar zone. In addition, as D. Andrews points out, no Asian state wishes to be the first to allow its currency to rise in value against the USD, thereby eroding competitiveness *vis-à-vis* its main regional economic partners.[19] Another argument for *status quo* in currency composition in case of Asian accumulating countries is capital loss for central bank connected with depreciation of the USD.

Indeed, for the time being, the concentration of foreign reserve holdings in USD assets remains significant in Asia. This supports the idea that a possible diversification of foreign reserves out of the USD could be implemented at a slow pace. This is in line with the ECB's official position – neither to encourage nor discourage the euro's international role.

References

Andrews D., *Orderly Change. International Relations since Bretton Woods*, Cornell University Press, Ithaca 2008.

Bird G., Mandilaras A., Reserve accumulation in Asia. Lessons for holistic reform of the international monetary system, *World Economics* 2005, Vol. 6, No. 1.

Blanchard O., Milesi-Ferretti G.M., *Global Imbalances: In Midstream?*, IMF Staff Position Note, SPN 09/29, December 2009.

Breuss F., Roeger W., Veld J., Global impact of a shift in foreign reserves to euros, *European Economy, Economic Papers* 345, November 2008.

Couthino L., Exchange rate policy: The euro area, the United States and Asia, *International Finance* 2009, Vol. 12, No. 3.

De Beaufort Wijnholds J., Sondergaard L., *Reserve Accumulation. Objective or By-product?*, ECB, Occasional Paper Series, No.73/2007.

Lane P.R., Milesi-Ferretti G.M., *Europe and Global Imbalances*, IMF Working Paper, No. 07/144, 2007.

The Accumulation of Foreign Reserves, ECB, Occasional Paper Series, No. 43/2006.

[18] Many Asian countries that have accumulated reserves (e.g. China) do not disclose the currency composition of their reserves to the IMF. Thus, the official statistics presented by IMF may underestimate the increase in the share of the euro in world reserves.

[19] D. Andrews, *Orderly Change. International Relations since Bretton Woods*, Cornell University Press, Ithaca 2008.

AKUMULACJA REZERW WALUTOWYCH W AZJI I JEJ WPŁYW NA FUNKCJONOWANIE UNII GOSPODARCZEJ I WALUTOWEJ (UGW) ORAZ EURO

Streszczenie: Akumulacja rezerw walutowych jest istotnym elementem polityki gospodarczej krajów azjatyckich, pogłębiającym zewnętrzne nierównowagi płatnicze i mającym poważne konsekwencje dla funkcjonowania gospodarki światowej. Dla UGW akumulacja rezerw walutowych i wynikająca z niej polityka kursu walutowego w krajach azjatyckich istotnie wpływają na kurs euro i konkurencyjność europejskiego sektora wytwórczego. Ogólnie – im mniejsza elastyczność kursu walutowego walut azjatyckich, tym większe ciśnienie aprecjacyjne na euro. Rodzi to istotne dylematy dla Europejskiego Banku Centralnego odnośnie do zasadności ewentualnej stabilizacji kursu euro. Innym kanałem wpływającym na kurs euro oraz, szerzej, na perspektywy euro jako waluty międzynarodowej, są struktura walutowa rezerw oraz stopień i tempo substytuowania dolara przez euro w funkcji waluty rezerwowej. W kontekście powyższych skutków, rozpoznanie motywów akumulacji rezerw może pomóc ocenić trwałość takiej strategii w czasie i szansę ewentualnej polityki dekumulacyjnej jako ścieżki rozładowania napięć w międzynarodowych stosunkach gospodarczych.