

## **What international monetary system for a fast-changing world economy?<sup>1</sup>**

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*Though the renminbi is not yet convertible, the international monetary regime has already started to move away from a 'hegemonic' system centred around the US dollar. It is likely to move towards a 'multipolar' system, with the dollar, the Chinese currency and the euro as its key pillars. This shift corresponds to the long-term evolution of the balance of economic weight in the world economy.*

*Such an evolution may mitigate some flaws of the present (non-) system, such as the Triffin dilemma or the asymmetry of adjustments. However it may exacerbate other problems, such as short-run exchange rate volatility or the scope for 'currency wars', while leaving key questions, such as global liquidity provision, unresolved. Hence, in itself, a multipolar regime can be both the best and the worst of all regimes. Which of these alternatives will materialise depends on the degree of cooperation within a multilateral framework.*

*Such cooperation should target monetary policies and global liquidity rather than nominal exchange rates. The strength of international cooperation and multilateral surveillance will be even more needed during the (long) transition towards a multipolar system, which will involve specific risks such as abrupt reserve diversification, liquidity shortages, or persistent imbalances. These risks will be mitigated by the strategy of China to gradually internationalise its currency, but enhanced surveillance will also be needed.*

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*“We can conclusively prove that we need a flying object; inventing the airplane is a different matter altogether”*

Tommaso Padoa-Schioppa (2010)  
This paper is dedicated to his memory

International monetary relations are often looked at *in abstracto*, as if there was an ideal international monetary regime independent of the underlying economic structures and the global balance of economic power. In this paper we take the opposite viewpoint. Our aim is to examine and discuss what the major changes under way in the world economy imply for the evolution of international monetary relations.

We posit that the single most important economic change in the current period is the redistribution of economic power, after two centuries during which Europe and the US dominated the world economy. We consider that the single most important monetary question for the coming decades is how the international monetary regime should and will adapt to this change.

We start in section 1 with a concise characterisation of the current international monetary regime. Next, we review in section 2 past and likely future changes in the balance of economic power. We then turn in section 3 to the relationship between economic structures and the international monetary system. In section 4, discuss the properties of a hegemonic system and in section 5 we possible monetary arrangements for the coming decades. We draw conclusions in section 6.

## **1. The current regime**

An international monetary regime, or a system<sup>2</sup> is a set of rules and institutions that constrains or at least influences sovereign choices and monetary relationships between nations or groups of nations (McKinnon, 1993). International monetary regimes are generally considered to have four elements:

- Currency convertibility and, more generally, the system of capital flows;
- The exchange-rate regimes;
- Rules and institutions for liquidity provision in case of emergency;
- Monetary surveillance and cooperation.

In the aftermath of the second world war, the focus was put on currency convertibility and liquidity provision through the creation of the International Monetary Fund. Most currencies were then pegged to the dollar, which was itself pegged to gold (hence the gold-exchange standard). In this regime, the scope for monetary surveillance and cooperation depended on the extent to which the key country in the system (the United States) was willing to fulfil its role of stabilising hegemon (Kindleberger, 1981).

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<sup>2</sup> We speak alternatively of monetary regimes and monetary systems. Regime is a more factual characterisation of the state of affairs. ‘System’ has normative connotations (which is why the current regime is often called by critics a “non-system”). Note that Mundell’s classical definition of a system is ambiguous in this respect (see McKinnon, 1993).

The international regime evolved thereafter with the end of the gold anchor (1971), the general spread of floating exchange-rate regimes amongst advanced economies (1973), the emergence of European monetary cooperation (1979) and then of a European single currency (1999), some attempts of exchange-rate targeting among the members of the G7 (1985, 1987) and, in the 1990s-2000s, the increasing importance of emerging countries, whose choices differ from those of the advanced countries. Consequently, the present regime is characterised by:

- Widespread currency convertibility and free capital mobility among advanced and emerging countries, with the major exception of China;
- Mostly free floating amongst advanced economies or zones, and various behaviours inspired by the fear of floating in emerging and developing countries (with the exception of Latin America and some European countries);
- Liquidity provision in case of emergencies based on IMF facilities as well as bilateral swaps and regional agreements (such as the Chiang Mai agreement in East Asia); however, this is considered insufficient, leading to self-insurance through official reserve accumulation;
- Monetary surveillance and cooperation at regional (EU) or multilateral (G20, IMF) levels, the effectiveness of which is disputable.

This regime can alternatively be characterised as multipolar or unipolar. Some authors (for example Rose, 2006) claim that what has emerged from the ashes of the Bretton Woods order is a system in which there is “no role for a centre country, the IMF, or gold”, but in which a growing number of advanced and emerging countries have adopted some form of inflation targeting and float independently. But others (for example Padoa Schioppa, 2010, or, implicitly, Zhou Xiaochuan, 2009) see the current international monetary regime as one that gives a central role, and privileges, to the US as the country issuing the main international currency. Others again (for example Dooley, Folkerts Landau and Garber, 2003) claim that part of the world has moved to a floating regime of the sort described by Rose while another part lives under a revived Bretton Woods regime centred on the US dollar, which leads Aglietta (2010) to call it a semi-dollar standard.

Table 1 presents key statistics concerning the international role of the dollar, the euro and the yen. Although gradually declining, the role of the dollar as the pivotal currency remains clear for the means-of-payments and store-of-value functions. The crisis has also highlighted the extent to which non-US banks, including those from Europe, had accumulated large gross and net US dollar positions and were dependent on continuous access to dollar funding. This led the US Federal Reserve to take a leading role in the provision of liquidity to non-US banking sectors through international swap agreements (McGuire and von Peter, 2009).

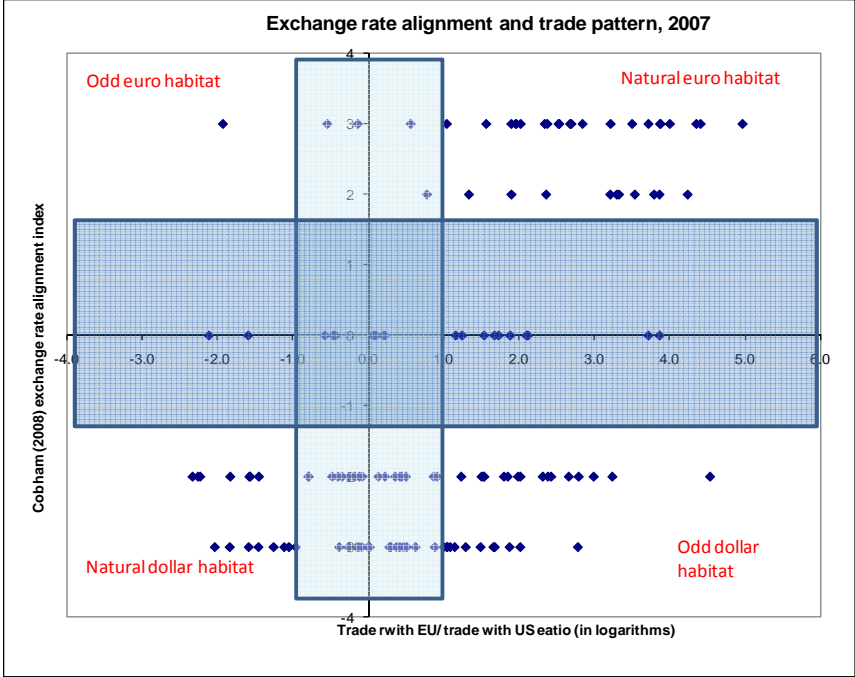
**Table 1: Selected indicators of the international use of key currencies, in percent of world totals**

	Dollar	Euro	Yen	Other
Forex market turnover, April 2010 (/200%)	84.9	39.1	19.0	57.0
Outstanding international debt securities, end 2009 (excluding domestic issues)	45.8	21.4	5.8	17.0
Outstanding international bank loans, end 2009 (excluding trans-European loans)	53.8	15.7	3.6	26.9
Allocated foreign exchange reserves, end 2009	62.2	27.3	3.0	7.5

Sources: ECB (2010), BIS (2010).

As for the unit-of-account functions, the dollar remains key for commodity and energy markets, although it is less the case for manufacturing trade. It also remains key for monetary anchoring. For example, Bénassy-Quéré et al (2006) have estimated that, from 1999-2004, 92 percent of a sample of 59 currencies were de facto pegged. Among them, 56 percent were pegged to the US dollar, 14 percent to the euro and 22 percent to a basket.<sup>3</sup> For 2007, Goldberg (2010) finds that out of 207 countries, 96 were either dollarised or had their currency pegged to the dollar and another eight were in a managed float against the dollar, resulting in 36 percent of non-US world GDP being linked to the dollar. This is confirmed by Figure 1 which plots on the X-axis a country’s ratio of trade with the EU to trade with the US and on the Y-axis the exchange rate alignment index of Cobham (2008). It is apparent that countries tend to peg to the currency of the country they trade with most. However, many countries exhibit an odd dollar habitat (meaning they trade more with the EU but align more to the US dollar) whereas there is only one example of the reverse situation. This is evidence of the importance of the “Bretton Woods 2” regime of Dooley et al (2003).

**Figure 1: Trade and Exchange-rate relationships in the 2000s**



Source: Authors’ calculations based on Cobham (2008) and IMF-DOT statistics.

On the whole, the dollar remains the main pivotal currency for all three monetary functions – means of payment, unit of account, store of value. It is true that a group of advanced and emerging countries, most of which adopted in the 2000s some variant of inflation targeting strategies, has severed direct links with the US dollar through the pegging of the exchange rate or the accumulation of foreign exchange reserves. But even these countries proved to be dependent on the Federal

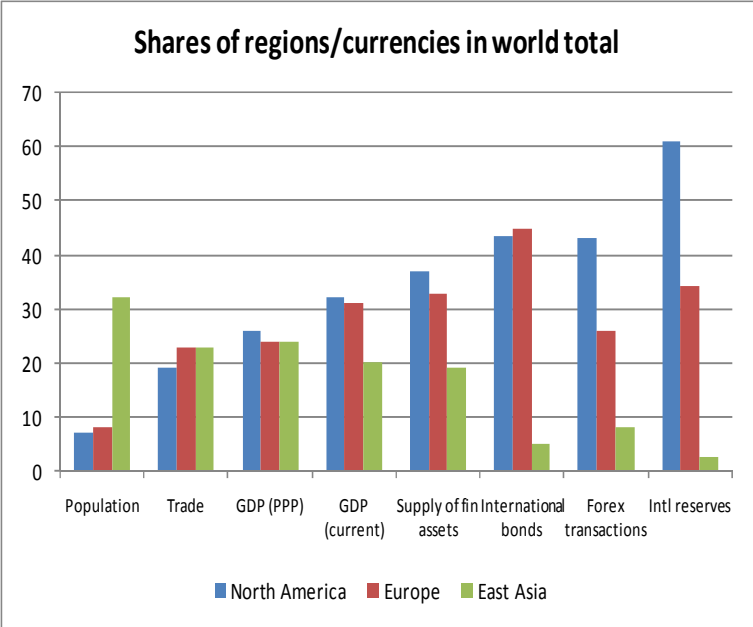
<sup>3</sup> The sample excludes all euro-area countries. Bénassy-Quéré et al (2006) argue that the attrition of intermediate regimes during this period is the mere consequence of monetary unification in Europe, which has moved the corresponding intermediate (ERM) regimes into hard pegs.

Reserve for liquidity provision at the height of the crisis, despite the emergence of regional arrangements and the extension of IMF facilities.

This still-central role of the dollar contrasts strongly with the emergence of a tripolar economy in which North America weighs no more than either Europe or east Asia (Figure 2). It is also inconsistent with the need for emerging countries to run independent monetary policies focused on domestic inflation and financial stability at a time when their economic conditions differ markedly from those of the US, where monetary policy remains geared towards limiting the adverse growth consequences of the deleveraging cycle.

Although the current regime worked remarkably well during the global crisis, not least thanks to the cooperation between the ECB and the Fed and the role taken by the latter in the provision of global liquidity, it would be unwise to rely on the status quo: the current regime is ill-suited to the new global economy emerging from the crisis. If, and in what direction the regime will evolve is a key question that can no longer be ignored.

**Figure 2: A hegemonic monetary system in a tripolar economic world**



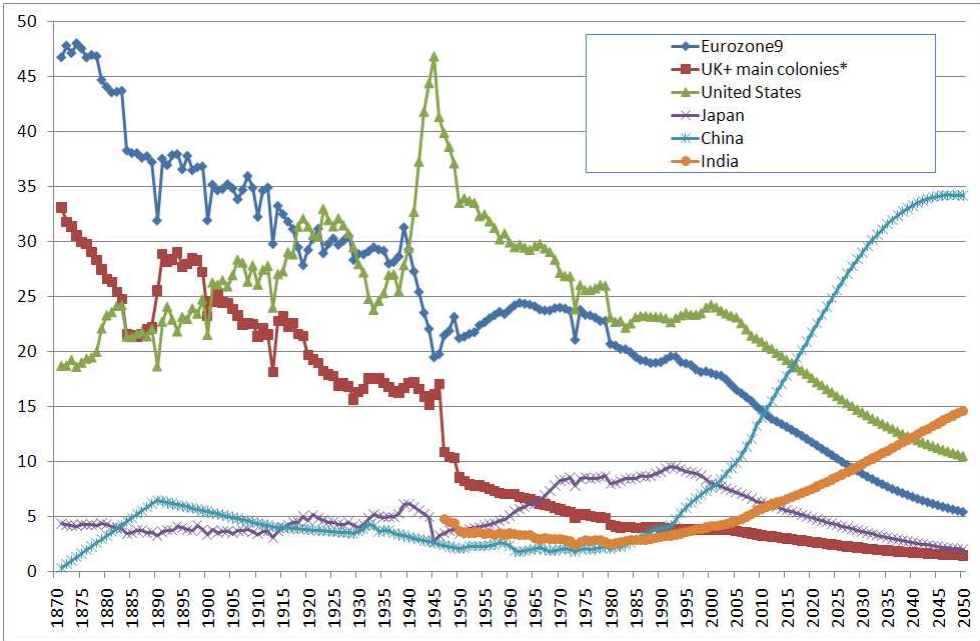
Source: Authors' calculations.

**2. The changing balance of economic power**

Throughout the nineteenth and twentieth centuries the share of the largest economy in world GDP (measured at PPP exchange rates) consistently remained above 15 percent. UK weight at its peak in the late nineteenth century represented ten percent of world GDP, but more than twenty percent taking into account the British Empire. US weight was consistently above twenty percent in the post-second world war era. The world economy in the twenty-first century is likely to see the emergence of two new dominant players: China and India. In the meantime, there will be an interregnum during which economic power will be much more evenly distributed between a core group of countries.

Figure 3 provides a bird eye’s view of the evolution of the world economy and the distribution of economic power from 1870 to 2050.<sup>4</sup> For most of the gold standard period (1879-1913), the sterling area composed of the UK and its main colonies was either the dominant power in terms of GDP or a close second to the US. Throughout the Bretton Woods period (1945-1973), the US was the undisputed dominant power. But according to long-term projections, China should overtake the US in PPP terms around 2015 and India should overtake it around 2040. These two economies are likely to be the only ones whose weight at 2005 PPP exchange rates will exceed 15 percent of the global economy at the 2050 horizon. By the middle of the century, US weight should be down to 10 percent and that of the euro area down to 5 percent. Even assuming enlargement of the euro area to the current EU and beyond, its weight is unlikely to reach 10 percent.

**Figure 3: Percentage shares of selected countries and areas in world GDP, 1870-2050 (At 2005 PPP exchange rates)**



Sources: Angus Maddison’s historical statistics and CEPII projections.

\* Australia (up to 1900), New Zealand (up to 1939), India (up to 1946). Canada is not included as it was already granted significant autonomy in 1867.

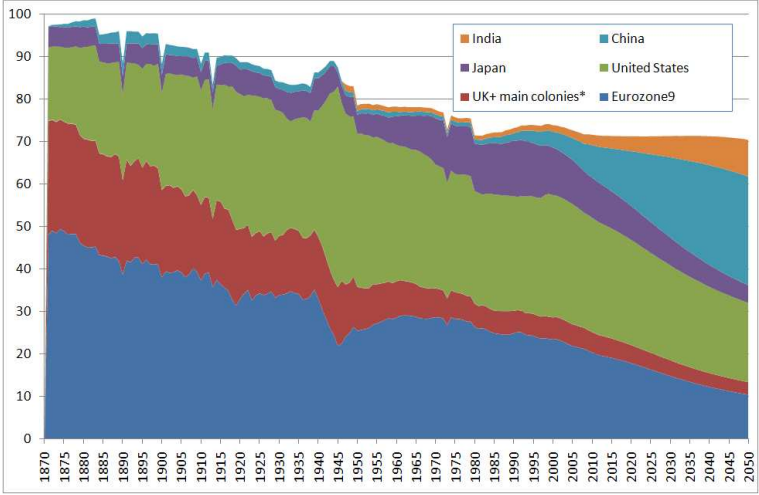
Projections of economic weights at the 2050 horizon on the basis of PPP exchange rates however give a somewhat exaggerated picture of the dramatic changes ahead. First, a truly tri-polar world can be expected to emerge within a shorter-term horizon (ca 2020). From 2010 to 2030, economic power will in fact be distributed more evenly than at any time in recent history. Second, PPP weights are appropriate for measuring shares of production or living standards, but not monetary relations, which are conducted in nominal terms. It is therefore useful to look also at shares of world GDP evaluated in constant dollars at 2005 exchange rates.<sup>5</sup> This reduces the weights of developing and

<sup>4</sup> Figure 2 is based on Angus Maddison’s historical statistics (available from the Groningen Growth and Development Centre [www.ggdc.net](http://www.ggdc.net)) and long-term economic projections prepared by CEPII (Fouré et al, 2010). Most available long-term projections result in a qualitatively similar picture of the future of the world economy, so our developments here are not contingent on the use of a particular projection.

<sup>5</sup> Projections of relative prices can also be accounted for based on a Balassa-Samuelson effect (see Fouré et al, 2010).

emerging countries, especially China and reinforces the image of a rather even balance of monetary power in the decades ahead. China, the US and Europe can be expected to be the main economic players in the three or four decades to come (Figure 4).

**Figure 4: percentage shares of world GDP of selected areas, 1870-2050  
(In constant prices at 2005 exchange rates)**



Source : Maddison and CEPII.

\* Australia (up to 1900), New Zealand (up to 1939), India (up to 1946).

**3. Monetary consequences**

The implications for monetary arrangements of changes in economic power should be discussed with caution. The experience of the late nineteenth century/early twentieth century indicates that the British pound retained a key monetary role long after the UK had lost its economic dominance. This suggests that the impact of economic power on monetary power is likely to be delayed.<sup>6</sup> Furthermore, two international currencies can coexist for extended periods of time (Eichengreen and Flandreau, 2008).

Economists generally ascribe the time lag between the acquisition of dominant economic weight and its monetary counterpart to the network externalities that favour the incumbent currency. But there are also more mundane reasons. Economic size is far from being the only determinant of international currency status. Critical factors are:<sup>7</sup>

- Financial openness,
- The existence of a liquid and deep bond market,
- Price stability and the predictability of monetary policy, and
- The ability of the policy system to cope with shocks.

<sup>6</sup> The reasons for such inertia are relatively well known. They hinge on network externalities that tend to favour the international currency already in place. According to Eichengreen and Flandreau (2010), they should however not be overstated, while the role of financial regulations and public support (through the behaviour of the central bank) proved to be key in the race between the pound and the dollar in the interwar period.

<sup>7</sup> For an econometric estimation based on currency shares in foreign exchange reserves, see Chinn and Frankel (2008).

The example of Japan in the 1980s and the 1990s is indicative of the fact that, in spite of economic ascendancy, no currency can acquire international status if such important conditions are not met. In addition, non-economic factors such as political cohesion and sheer power play a role (Posen, 2008).

Table 2 summarises the respective situations of the euro and the renminbi with respect to these criteria. It shows that the euro has many of the attributes that could make it a good candidate for internationalisation, but that it is still handicapped by its incomplete governance and the lack of political cohesion. These factors may be of secondary importance in normal times but they matter considerably in times of crisis when the ability of the governance regime to cope with unexpected shocks is being tested. The renminbi has significant handicaps in the short term, due to the limited openness and development of China's financial markets, as well as to a weaker policy record, but it has strong governance underpinnings. Provided financial reforms are carried out in China, it could become a major challenger, and ultimately the main challenger to the dollar (see Dobson and Masson, 2008; Thimann, 2009).

**Table 2: Potential for internationalisation: the euro and the renminbi, in 2010**

	euro	renminbi
Size	20.3% of world GDP, decreasing	7.6% of world GDP, increasing
Financial openness	Full capital mobility	Restricted capital mobility
Financial markets	Second after the US (see Table 1), but bond markets remain fragmented in the absence of unified eurobonds	Underdeveloped
Price stability and monetary policy predictability	Very good track record	Good track record but at risk, in part because of currency peg.
Ability of policy system to cope with shocks	Limited by institutional arrangements	Strong
Power and cohesion	Limited by political fragmentation	Strong

There are therefore two potential rivals to the dollar. The first, the euro, has many of the attributes of an international currency but its economic base is bound to shrink in relative terms and the stability of its political base is questionable. The second, the renminbi, has strong economic and political underpinnings but it cannot rely on a developed financial infrastructure.

Against this background, we expect the international monetary regime in the coming decades either to remain essentially unipolar or, rather, to evolve towards a multipolar system. The latter evolution may take considerable time and will require basic conditions to be met: genuine multipolarity can only develop if each pole allows its currency to play an international role. In the current context of open markets for trade in goods and financial assets, this requires allowing non-residents to hold domestic and offshore financial assets in the home currency, and enabling them to convert assets into other currencies without restriction at any time. To have the market work smoothly, this would also require residents to be allowed to buy and sell foreign-denominated bonds without constraints.

#### 4. Hegemonic stability?

There are many questions about the quality, the stability and the sustainability of a multipolar regime. Scholars of international monetary relations often point out that a unipolar system exhibits ‘hegemonic stability’ properties (see Kindelberger, 1981, or the critical assessment by Eichengreen, 1987). The rationale for it is that the hegemon is supposed to internalise the externalities involved in the provision of a particular global public good – monetary stability – whereas none of the issuers of competing currencies has an incentive to behave in this way. Although attractive, this theory may overstate the willingness of the United States to internalise global stability in its policy-making process. For instance, the loose monetary policy during the Greenspan era may not have fully internalised the impact of cheap credit worldwide. By the same token, the US Fed's choice to embark on quantitative easing in the aftermath of the crisis did not internalise the consequences for emerging countries in terms of hot-money inflows. In fact, there are obvious limitations to the hegemonic stability approach. First, it starts from the assumption that the hegemon enjoys undisputed economic predominance and therefore has an unambiguous incentive to preserve and nurture international stability. Second, it often overlooks the risk that the hegemon exploits its monopoly power – in other words makes use of its exorbitant privilege to bolster narrow national interest, at the expense of global stability. However a simple review of the traditional functions of the monetary hegemon suggests that declining relative size may affect a country’s ability to play that role (Table 3).

**Table 3: Roles of the monetary hegemon and their current relevance**

Hegemon’s role	Relevance in current context	Does size matter?
Enforcer of rules of the game (e.g. exchange rates)	Yes (together with international institutions)	Yes
Global anchor (conductor of international orchestra)	Yes	Yes
Supplier of reserve assets	Yes	Yes
Buyer of last resort	Limited for goods, relevant for assets	Yes
Crisis coordination leader	Yes	Yes
Lender of last resort	Together with IMF	Yes

It is also frequently argued that currency competition would destabilise the system by entailing large and sudden swings in portfolio allocation choices (see, eg United Nations, 2009). Indeed, if two (or three) international currencies were to share the same characteristics in terms of liquidity and risk, they would become more substitutable. This would make portfolio allocations more sensitive to shocks to expected returns, and hence exchange rates would become more volatile.

Although straightforward, this line of reasoning concerns short-run volatility. Suppose, for instance, that US assets are expected to yield lower returns. International investors will switch to the competing key currencies, triggering a fall in the value of the dollar. But this fall in turn leads to a rise of expected returns, hence increasing the willingness of international investors to hold dollars. In

brief, enhanced substitutability may increase short-run volatility, but not necessarily long-run deviations of exchange rates from fundamental equilibrium. On the contrary, it is possible to argue that currency competition will remove the willingness of investors to hold US assets whatever their expected return, which may place a powerful brake on US leverage.<sup>8</sup> To the extent that short-run volatility is easily hedged, as opposed to long-lived deviations, the cost of exchange-rate volatility could even be curbed despite higher short-run volatility.

The traditional arguments in favour of an hegemonic system are therefore weaker than they appear at first sight. They provided a fair rationalisation of the post-war order but fail to offer a guide for the assessment of alternative arrangements in a radically different world situation.

### **5. The pros and cons of a multipolar system versus a hegemonic one**

Assessing international monetary regimes is an especially difficult task. One reason for this is that since the same system covers the whole world, there are few opportunities to compare performances. Another reason is that, as already mentioned, an international monetary system is rarely a pure one. For instance, the present system has already moved away from a pure, dollar-standard system, and it is unlikely to move towards a pure, multipolar system in the near future. So one must observe the performance of hybrid systems without benchmarks. Claims that the world would have performed better with a different monetary system are typically irrefutable (this is perhaps why they remain unchallenged).

It is however useful to contrast schematic systems to gauge the pros and cons of moving in a particular direction. In the following we compare two polar systems:

- 1) Hegemony: a system in which one international currency is used by all countries as an anchor for pegging purposes and as a store of value – hence something close to the so-called ‘Bretton Woods 2 system’ of Dooley, Folkerts Landau and Garber (2003) linking emerging currencies to the US dollar, and
- 2) Multipolarity: a system with free capital mobility, floating exchange rates, and various international stores of values bearing the same status.

In both cases we assume that economic power is distributed in the sense of Figure 4, so implicitly the situation we have in mind is that of the 2020s.

As already indicated, the current regime blends elements of these two polar systems. What we want to learn from the comparison is if the international community should favour a move in one or the other direction.

To assess both systems, it is necessary to rely on a set of generally accepted criteria. Ultimately, the international monetary regime should favour growth, monetary stability and international equity. This involves several dimensions, as listed below.

- *Economic efficiency criteria*: to serve efficiently as means of payments, international currencies should be limited in number (to minimise transaction costs); for the same reason,

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<sup>8</sup> See Bénassy-Quéré and Pisani-Ferry (2010).

they should be the currencies of large countries or areas (so that the currencies are already used by a large number of agents). The system should minimise the need to build up costly official reserves.<sup>9</sup>

- Rather, it should favour an efficient allocation of capital worldwide. For instance, it should be consistent with savings flowing from developed to less-developed countries, in line with differentials in the marginal productivity of capital after taking into account limiting factors (eg political risk). The system should also avoid large misalignments of real exchange rates with their fundamentals, to avoid resource misallocation both internally (between traded and non-traded goods sectors), and internationally arising from price distortions.
- *Economic and financial stability criteria.* This involves several complementary dimensions:
  - A major lesson from the crisis is that financial stability is a public good that should be sought after by governments individually as well as collectively, while minimising the associated efficiency costs. The international monetary system has a key role to play in this respect, both to avoid the build-up of imbalances and to mitigate the impact of crises. Crisis prevention should include the provision of a global anchor, so that monetary policies are geared towards global stability and reduce the risks of worldwide credit bubbles or deflation.<sup>10</sup> This essentially boils down to avoiding situations of excess or too little liquidity at global level.
  - The international monetary system should also provide incentives to all governments to conduct policies consistent with the avoidance of excessive imbalances and the build-up of large, unsustainable net foreign asset positions.<sup>11</sup> Crisis mitigation involves ensuring resilience when confronted with major economic and financial shocks, such as sudden capital surges and stops. What can be expected from the international monetary system is that it leaves sufficient autonomy to governments and central banks to respond with national policy instruments and that it ensures the provision of international liquidity when necessary.
  - A further dimension is to ensure that exchange-rate volatility remains limited and/or manageable (through the development of affordable hedging instruments, which requires deep foreign-exchange markets). It is also desirable that the system prevents or limits adverse spillovers effects, as when a shock to country A has

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<sup>9</sup> The cost of official reserves results from the spread between their remuneration and that of alternative investments. As argued by Landau (2009), individual countries however do not internalise the total cost of reserves, which includes the cost of global imbalances and subsequent crises.

<sup>10</sup> We do not enter here the well-known discussion on whether other forms of bubbles affecting stock markets or commodities can be avoided through appropriate monetary policy. The discussion on this issue is essentially the same at national and at global levels.

<sup>11</sup> The precise meaning of 'excessive imbalances' and 'unsustainable NFA positions' is obviously a matter for discussion. Again, this applies to all international monetary systems. We do not claim to have a yardstick to determine what external balances should be, we only claim that it belongs to the international monetary system to provide incentives to appropriate balances.

destabilising effects on the exchange rate between countries B and C. By the same token the system should discourage and, if necessary, punish beggar-thy neighbour policies, including 'currency wars' in situations of global demand shortage.

- *Equity criteria*: the system should ensure the symmetry of adjustments, so that balance-of-payments adjustments do not fall only on a specific category of countries (eg deficit countries whose currency has no international status). Equally, it should avoid granting one country the 'exorbitant privilege' of being relieved from international constraints, unless these are the counterpart of corresponding duties.
- *Feasibility criteria*: post-Bretton Woods monetary history has shown that genuine international cooperation is the exception rather than the rule, and that it is more easily done on a regional basis. Hence, the system should not be too demanding in terms of global cooperation, and it should be consistent with each region keeping a significant degree of freedom to organise cooperation within itself and to gear monetary policy towards domestic stability. Additionally, reform of the system should rely on, rather than oppose market forces.

Table 4 provides a first pass at assessing the two polar regimes on the basis of our set of criteria. It suggests that moving in the direction of a multipolar monetary system would help mitigate some of the problems of the present regime.<sup>12</sup>

- As regards *economic efficiency*, to the extent that monetary blocks would match economic ones, the loss in terms of transaction costs, of having several key currencies rather than a single one, would remain limited. At the same time there would be some gains in terms of capital allocation through a lesser accumulation of costly and risky official foreign-exchange reserves, greater incentives to allocate capital within each monetary block, and less scope for real exchange-rate misalignments (although short-term exchange-rate volatility could actually be magnified).
- As regards *economic and financial stability*, multipolarity could help mitigate the Triffin dilemma,<sup>13</sup> and limit some causes of longstanding imbalances and their possible unwinding through crises. Adverse spillovers affecting bilateral exchange rates would also be reduced.
- As regards *equity*, provided all key currencies are truly allowed to float, a multipolar system would reduce the asymmetry of adjustments and the 'exorbitant privilege' would have to be shared.

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<sup>12</sup> By focusing on extreme systems, we do not discuss here whether moving *some way* towards a multipolar system could actually worsen, rather than improve the situation, as it is the case for partial trade liberalisation.

<sup>13</sup> See Fan et al (2010). Note that the Triffin dilemma would be spread across the key countries or areas rather than eliminated (see Mateos y Lago et al, 2009). Only a supra-national currency could fully eliminate the Triffin dilemma (see United Nations, 2009). However, as Eichengreen (2009) puts it, "The more alternatives central banks and other investors possess, the more pressure policymakers will feel to take the steps to maintain those investors' confidence" (p. 68). This is consistent with an attenuation of the Triffin problem itself.

- In terms of *feasibility*, a multipolar system would be consistent with the evolution of the global economy as discussed in section 2.

However, a move towards a multipolar system would leave some important questions unanswered, and it could even worsen some of the properties of the current regime. This is especially the case for economic and financial stability. For instance, the management of global liquidity would require strong cooperation among key countries, and the move to multipolarity would not fundamentally change the problem of liquidity provision in times of crisis (to the extent that the Federal Reserve would no longer feel in charge, it may even worsen it). Multipolarity may actually exacerbate short-term exchange-rate volatility, increasing the need for affordable hedging products (this last consequence should however be weighed against the reduced scope for longstanding exchange-rate misalignments). Also, 'currency wars' could become more likely because key countries would be unlikely to relinquish exchange-rate objectives in situations of deflation. Hence, the so-called 'N-1' problem (with N currencies, there are only N-1 independent exchange rates) would be exacerbated by the elimination of US benign neglect.

**Table 4: A schematic assessment of the hegemonic and multipolar monetary regimes**

	<b>Hegemony</b>	<b>Multipolarity</b>	<b>Gains from multipolarity<sup>(*)</sup></b>
<i>Efficiency Reserves</i>	Incentive to accumulate costly official reserves for both self-insurance and pegging motives.	Incentive to accumulate reserve for pegging motives only for peripheral countries. Cost of reserves marginally reduced.	+
	Large exchange-rate risk on reserves.	Reduction of exchange-rate risk through better diversified reserves.	+
<i>Economies of scale</i>	Maximum.	Lesser efficiency (but cost limited if # of international currencies small).	-
<i>Global savings-investment balance</i>	South-North capital flows as South accumulates holdings in reserve currency.	Bias reduced, better capital allocation (if regional monetary blocks).	+
<i>Real exchange-rate misalignments</i>	Large potential for misalignments due to nominal pegs on the key currency.	Potential for misalignment limited to market bubbles (key currencies) and to intra-regional rates (nominal pegs).	+

<b>Stability</b> <i>Global anchor</i>	Provided by the hegemon, requires that it does not focus exclusively on domestic monetary objectives. Deflation bias limited by the ability of the hegemon to run large deficits without tears	Global stance resulting from independent national monetary policies may fail to ensure adequate stability	?
<i>Incentives to stability policies</i>	System may favour build-up of imbalances (incentive for the periphery to accumulate reserves in the hegemon's currency, no incentive for the hegemon to adjust - Triffin dilemma).	Depend on adequacy of multilateral arrangements and governance. Symmetric adjustment pressure for key countries, still asymmetric for peripheral countries.	?
<i>Resilience to major shocks, capital surges and stops</i>	Via reserve accumulation in the periphery. In times of crisis hegemon to provide liquidity through swap lines	Need for multilateral liquidity provision and possibly enhanced role of regional swap arrangements	?
<i>Exchange-rate volatility</i>	Stable portfolio allocations due to unique liquidity of the hegemon's financial market	More stability within monetary blocks, less stability (needing hedging) across blocks	-
<i>Symmetry of exchange-rate adjustments</i>	Asymmetries (euro/dollar reacts to a rise in China's wealth)	No asymmetry if all key currencies float	+
<i>Potential for currency wars</i>	Limited (benign neglect of hegemon)	Yes (N-1 problem)	-
<b>Equity</b> <i>Symmetry of balance-of-payment adjustments</i>	No: adjustment falling on deficit countries that do not issue the international currency	More scope for symmetric adjustments provided key currencies truly float, but still some asymmetry for non-key countries.	+
<i>Exorbitant privilege</i>	Yes: unequal adjustment burden.	Shared privilege.	+
<b>Feasibility</b> <i>Status quo bias /Incentives to change</i>	High status quo bias in the short run, yet increasing risk of abuse of dominant position by weakening hegemon	Delicate transition likely to slow down change	-
<i>Coordination requirement</i>	Weak	Weak (regional hegemons), possibility of regional coordination.	+

(\*) In this column we summarise the gains (+) or losses (-) implied by moving from a 'pure hegemonic' system to a 'pure multipolar' one.

As for feasibility, it depends on the time horizon: there is little feasibility in the short term but feasibility will increase as time passes. On the whole, a move from a 'pure hegemonic' to a 'pure multipolar' system appears to be favourable in terms of efficiency and equity, and potentially unfavourable in terms of stability.<sup>14</sup>

It should however be repeated that the system has already moved away from being 'pure hegemonic'. For instance, the hegemon no longer provides a global anchor, and may fall short of resources for liquidity provision in future crises, when the relative size of the United States has declined. Still, one conclusion from this analysis is that even in a 'pure multipolar' system, international coordination would be needed especially to ensure stability. The good news is that coordination could then be more focused on a few objectives: the provision of liquidity, both in normal time and in time of crisis, and the prevention of 'currency wars'.

## 6. Transition and policy implications

So far, we have compared two polar regimes: 'pure hegemonic', and 'pure multipolar'. However the world is unlikely to jump from the former to the latter without a long transition period. The transition itself presents major risks, such as:

- Abrupt reserve diversification that would have a dramatic impact on exchange rates;
- Liquidity shortages, which could no longer be offset by the hegemon;
- Persistent imbalances involving the risk of precipitous unwinding.

The international community should focus on mitigating these risks through the development of financial safety nets, currency internationalisation, the strengthening of surveillance, and monetary cooperation.

- *Financial safety nets*: with the creation of new, less-conditional assistance facilities, the international community has already started to improve financial safety nets so that individual countries have less incentive to self-insure through reserve accumulation. Further improvements in this respect would have two effects: first, the provision of liquidity would be less dependent on bilateral agreements and would pave the way to a more multilateral system; second, less-conditional assistance facilities would contribute to removing one of the key motives for reserve accumulation – and in this respect also prepare the transition towards a multipolar system. It would be advisable to clarify in what circumstances – globally and nationally – instruments such as IMF facilities, regional facilities and bilateral swap lines should be made available, and how they can complement each other. A more ambitious step would be to reform IMF statutes to give the Special Drawing Rights (SDR) an enhanced role for the management of global liquidity, in cooperation with key central banks (see, Cooper, 2009; United Nations, 2009; Julius, 2010). Two conditions are needed for the SDR to play such role: (i) a reform of IMF statutes to modify the procedure for SDR allocations, and (ii) a development of the SDR role beyond official circles (see Camdessus, 2009).

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<sup>14</sup> Our analysis partially matches the conclusions of Mateos y Lago et al (2009) concerning the merits of hegemony versus multipolarity.

- *Currency internationalisation*: the emergence of a multipolar system will not result from a big bang, rather from small steps taken in China and possibly in the euro area. China has already made clear its willingness to internationalise the renminbi (see Cheung et al, 2010). This strategy is stabilising for exchange rates in the sense that it promotes both the demand and the supply of RMB-denominated assets and liquidity, even before the opening of the financial account. The euro area, meanwhile, should clarify its 'neither encourage, nor discourage' stance<sup>15</sup> and make clear if it is willing to let the euro play the role of an international currency and take on responsibilities at regional level. This would involve, for instance, the launch of standardised euro bonds to create the conditions for a deepening of the market. The ECB's swap policy towards other central banks in the neighbourhood and further away will also be important.
- *Surveillance*: a recent achievement of the G20 was IMF governance reform, decided in Seoul in November 2010. The resulting rebalancing of quotas and votes is a key ingredient for restoring confidence in the multilateral system and the IMF recommendations, although further reforms, such as relieving the Executive Board from day-to-day operational decisions, could help the Fund to be more reactive and authoritative (Camdessus, 2009). The Fund will issue guidelines to underpin the still unachieved Pittsburgh *framework for strong, sustainable and balanced growth*. Consistent with Table 4, these recommendations should tackle the various 'stability' concerns, in addition to more short and medium-term issues (persistence of imbalances, risk of deflation). Then, the question will be how to enforce these guidelines in all member countries, not only in those under adjustment programmes. In common with financial and banking issues, a good regulation is of little use if not backed up by strong surveillance.<sup>16</sup>
- *Monetary cooperation*: monetary cooperation is made difficult by the combination of incoherent exchange-rate regimes (since key players follow different regimes) and by the inconsistency of exchange-rate objectives, which has become especially clear in the post-crisis environment. One possibility would be to use the SDR as a coordination device. The inclusion of the renminbi in the SDR, conditional on further financial reforms in China, would be a significant step. Once the renminbi is included in the basket, the reformed SDR could serve as a financial instrument and as an anchor. A legitimate group of candidate countries for the coordination of monetary policies would emerge, composed of those issuing the five hard currencies (US, euro area, Japan, UK, China) in the SDR basket. As for regional cooperation, it could be organised *de jure* or *de facto* around each regional hegemon, which will have a stake in regional stability.<sup>17</sup>

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<sup>15</sup> See Bini-Smaghi (2008).

<sup>16</sup> For a practical proposal on how to strengthen surveillance, see Truman (2010).

<sup>17</sup> Historically, regional cooperation has proved difficult to sustain without a dominant country, and the projects of monetary cooperation in Asia (beyond swap arrangements) have encountered the lack of a clear leader economy in the region. Park and Song (2010) argue that the emergence of the renminbi will likely weaken regional initiatives around the ASEAN+3, but give rise to a *de facto* currency bloc around China.

It is no accident that a common thread in these recommendations is to strengthen the multilateral system. As shown by Table 4, a multipolar monetary regime can be the best and the worst of all regimes. It can either provide the foundations for institutionalising global cooperation and for combining it with regional cooperation, or it can result in permanent rivalry over exchange rates and over the management of global public goods. Which of these two routes is being taken will to a large extent depend on the strength and the timeliness of the initiatives taken to reform and reinforce the multilateral system.

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