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Hermann Remsperger* and Adalbert Winkler**

Emerging Markets and the Global Monetary System: The Challenge of Rising Inflation

While spillovers of the present financial turmoil in mature economies to emerging economies have so far largely been contained, the monetary policy implications of the financial turbulence present a challenge to the approach pursued by emerging markets in integrating into the global monetary system following the crises of the mid to late 1990s. Specifically, the period of a smooth coexistence between meeting inflation targets and maintaining a high degree of exchange rate stability is likely to come to an end.

In August 1998, the Russian crisis marked the peak of a period of financial and exchange rate turbulence in emerging economies. The turmoil hit mature economy financial markets with the near-collapse of Long-term Capital Management, which highlights how integrated financial systems across the globe have become. In August 2007, financial markets in mature economies were exposed to a crisis of confidence. More than one year later, conditions in financial markets are still far from normal and have even deteriorated. This time, however, spillovers to emerging markets have been contained, with the exception of a few countries. There are several factors to explain why the recent turbulence in the financial markets of mature economies has had a limited impact on emerging markets. These factors include improved fundamentals, abundant reserves, strong growth and little direct exposure to subprime instruments.

Overheating, rather than financial contagion or a severe growth slowdown, has been identified as the main risk emerging markets are currently facing.¹ Indeed, rising inflation may become the main transmission channel of the financial turbulence from advanced to emerging economies. This is because the monetary policy implications of the turmoil in mature economies present a challenge to the approach pursued by emerging markets in integrating into the global monetary system following the crises of the mid to late 1990s. Specifically, the period of a smooth coexistence between meeting inflation targets and maintaining a high degree of exchange rate stability is likely

to come to an end, as emerging markets are facing a sharper trade-off between domestic and exchange rate stability.

The paper is structured as follows. After this introduction we review the participation of emerging markets in the global monetary system along the lines of the three building blocks of the “impossible trinity” hypothesis – exchange rate regimes, financial integration and monetary policy. In particular, we analyse the extent to which emerging markets have been following the advice to adopt the corner solutions of exchange rate regimes, a hard peg or a managed or independent float, to avoid financial and exchange rate turbulences in a world of increasingly open capital accounts.² Overall, the evidence suggests that there has been little movement towards the corner solutions of exchange rate regimes. Moreover, emerging markets have been pursuing a rather cautious approach towards financial integration. Finally, in a macroeconomic environment characterised by significant slack in goods and labour markets, many authorities have broadly adopted the monetary policy stance of advanced economies. By taking this approach, emerging markets have been able to combine a comparatively high degree of exchange rate stability with low inflation, largely irrespective of the chosen exchange rate regime.

We then present evidence which indicates that this form of participation in the global monetary system is coming under increasing pressure, as adopting the monetary policy stance of advanced economies in the USA and the euro area might become incompatible

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¹ See IMF: Global Financial Stability Report, Washington DC, 2008.

² See S. Fischer: Exchange Rate Regimes: Is the Bipolar View Correct? Distinguished Lecture on Economics in Government, American Economic Association and the Society of Government Economists, Delivered at the Meetings of the American Economic Association, New Orleans; <http://www.imf.org/external/np/speeches/2001/010601a.htm>, 2001.

Table 1
Examples of Movements from the “Middle”
towards the “Corners”, 1997-2001

Country	Exchange rate regime change	Year of change
Brazil	Crawling peg -> Independent float	1999
Ecuador	Crawling band -> Independent float, followed by a hard peg	1999
Indonesia	Crawling band -> Independent float	1997
Thailand	Basket peg -> Managed float	1997
Poland	Crawling band -> Independent float	2000
Russia	Crawling peg -> Managed float	1998

Sources: IMF, authors' compilation.

with the goal of maintaining price stability. Thus, as in the mid to late 1990s, emerging markets are facing an increasingly tough choice between domestic and exchange rate stability. We conclude by noting that this trade-off might become a structural phenomenon if growth remains strong and emerging markets continue the process of rapid convergence towards mature economies' income levels. Against this backdrop, emerging markets can be expected to opt for more exchange rate flexibility in the future.

Exchange Rate Regimes since the Early 2000s

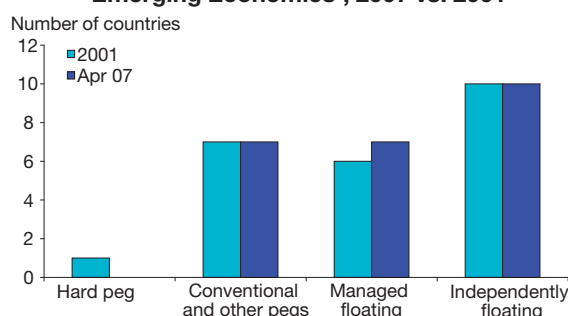
In the wake of the financial crises of the mid to late 1990s, the “impossible trinity” of monetary and exchange rate policy became the main pillar of what has been called the “bipolar view” on exchange rate regimes. With an increasingly open capital account, emerging market economies were expected to adopt either a managed or an independent float or to choose a hard peg, as soft, in other words adjustable, pegs were considered non-viable.³ With regard to the latter, capital markets would successfully test the exchange rate commitment in cases where authorities adopted a monetary policy stance in defence of the peg that is inappropriate from a domestic point of view.

In the years following the crises, the bipolar view was supported by empirical evidence (Table 1). While

³ Both floating arrangements are characterised by the fact that there is no predetermined path for the exchange rate as is the case in the hard and soft peg regimes. Under a managed float, the monetary authority influences the market determined exchange rate, while, under an independent float, interventions by the authorities are limited. A hard peg is defined as a peg where authorities institutionalise the peg either via a currency board arrangement or by unilaterally adopting the anchor currency as legal tender, thereby credibly committing themselves to adopting the monetary policy of the anchor country. Soft pegs may take the form of conventional fixed pegs, crawling pegs or pegs with horizontal or crawling bands.

Figure 1

Exchange Rate Arrangements in Selected Emerging Economies¹, 2007 vs. 2001



¹ = Argentina, Brazil, Chile, Colombia, Mexico, Peru, China, India, Indonesia, Korea, Malaysia, Pakistan, Philippines, Thailand, Czech Republic, Egypt, Hungary, Israel, Jordan, Morocco, Poland, Russia, South Africa, Turkey.

Source: IMF.

some smaller countries adopted a hard peg,⁴ several emerging market economies switched to a more flexible exchange rate regime and a domestic nominal anchor.⁵

Since then, expectations that emerging markets would continue moving strongly in the direction of the “corners” have not materialised. Focusing on a group of 24 selected emerging economies,⁶ the distribution of exchange rate regimes has been basically stable (Figure 1).⁷ While some countries have been moving between managed and independently floating regimes, the most prominent developments have been the breakdown of the currency board in Argentina at

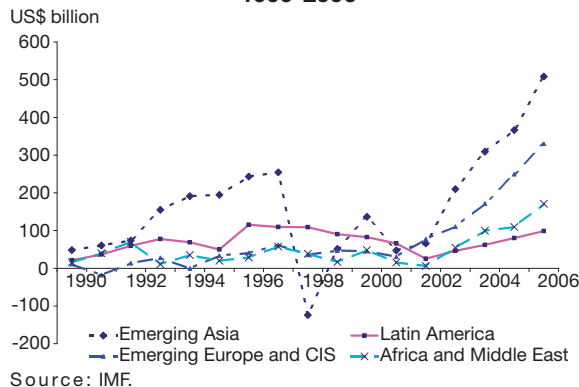
⁴ Most countries adopting and sustaining hard pegs since the early 1990s are very small (El Salvador, Montenegro, Bosnia and Herzegovina, Estonia and Latvia). Bulgaria and Ecuador, with about 7.3 million and 13.7 million inhabitants, respectively, are by far the largest countries.

⁵ See IMF: Exchange Arrangements and Foreign Exchange Markets, Developments and Issues, International Monetary Fund, Washington DC 2003.

⁶ The emerging market countries are Argentina, Brazil, Chile, Colombia, Mexico, Peru, China, India, Indonesia, Korea, Malaysia, Pakistan, Philippines, Thailand, Czech Republic, Egypt, Hungary, Israel, Jordan, Morocco, Poland, Russia, South Africa, and Turkey. The selection closely follows the group of countries compiled in the Morgan Stanley Capital International (MSCI) Emerging Market Index.

⁷ For the complete sample of IMF member states (186 in 2001, 188 in 2007), results have been even less favourable for the bipolar view. While the number of hard pegs has been basically stable since 2001, the overall number of floaters has dropped, with the share of managed floats rising at the expense of independent floats. The number of countries with a soft peg rose from 70 to 83. The classification is based on IMF staff's assessment of the observed (de facto) exchange rate arrangement rather than on the exchange arrangement a member notifies to the Fund in accordance with Article IV, Section 2(b) of the Fund's Articles of Agreement (de jure arrangement). See IMF: Review of Exchange Arrangements, Restrictions, and Controls, 2007, Washington DC.

Figure 2
Gross Private Capital Flows to Emerging Markets, 1999-2006



the end of 2001 and the shift from a conventional peg to a crawling peg in China in mid-2005.

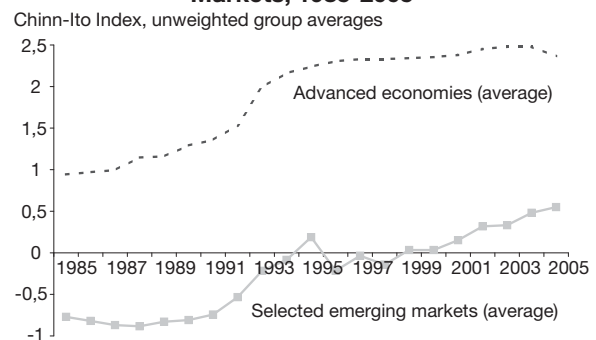
There are a number of reasons that might explain why emerging markets have not turned to the corner solutions.⁸ In light of the “impossible trinity” theorem, however, the evidence on exchange rate regimes suggests that emerging markets have either remained relatively closed to international capital flows or have had little need for a domestically oriented monetary policy that diverges strongly from the stance taken in advanced economies, i.e. the USA and the euro area.

Financial Integration

At first glance, the process of emerging market economies’ financial integration seems to have continued unabated. After a temporary slowdown following the crises of the late 1990s, gross private capital inflows have picked up significantly in recent years. In 2007, they reached unprecedented levels, both in absolute US dollar terms (see Figure 2) and expressed as a share of GDP.⁹ Other things being equal, this would indicate a need for more exchange rate flexibility, not less.

However, other indicators suggest that progress towards financial opening has been slow. For example, according to the Chinn-Ito Index,¹⁰ de jure financial integration of emerging economies has advanced only slightly in recent years (Figure 3). Major exceptions to this trend have been the new EU member states and countries with the prospect of EU accession, as financial opening has been a key prerequisite for EU

Figure 3
De jure Financial Integration in Selected Emerging Markets, 1985-2005



membership. If it had not been for these and some Latin American countries, on average de jure financial integration of emerging market economies would have stagnated at levels close to those of 1995.

Progress in capital account opening has been limited in emerging markets irrespective of the exchange rate regime they have been operating (Figure 4). The most pronounced distinction is in the group of independent floaters, where capital restrictions, re-imposed in the years of crisis, have been lifted in the course of this decade. However, even taking into account these steps towards liberalisation, emerging markets with a floating exchange rate continue to be significantly less financially integrated than advanced economies.

Restrictions on capital flows may be circumvented. Thus, indicators of de jure integration may underestimate the degree of de facto financial integration, as measured, for example, by the sum of foreign assets and liabilities, expressed as a share of GDP. However, again, the evidence points to a large gap between advanced economies and emerging markets (Figure 5). Indeed, while cross-border claims among advanced economies continued to grow at rates similar to those recorded in the mid to late 1990s, the speed of financial integration has been much more subdued for emerging markets.

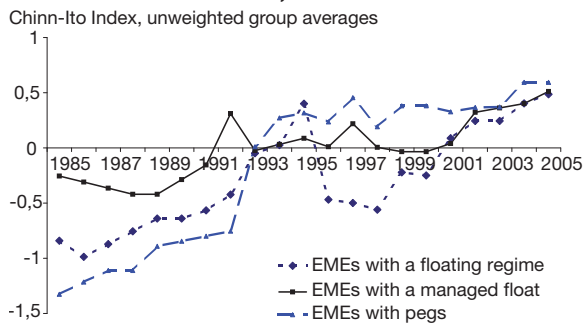
The pattern of financial integration has been very different as well. For advanced economies, financial integration has mainly taken the form of an intensive two-way trade of debt and equity instruments, reflect-

⁸ See, for example G. A. Calvo, C. M. Reinhart: Fear of Floating, in: *The Quarterly Journal of Economics*, Vol. 67, No. 2, 2002, pp. 379-408.

⁹ See R. S. Cardarelli, S. Elekdag, A. A. Kose: Managing Large Capital Inflows, in: *IMF World Economic Outlook*, October 2007, pp. 105-134.

¹⁰ The Chinn-Ito Index is a numeric interpretation of the IMF’s assessments laid down in the Annual Report on Exchange Arrangements and Exchange Restrictions and includes the four major categories on the restrictions on external accounts, namely the presence of multiple exchange rates, restrictions on current account transactions, restrictions on capital account transactions, and requirements for the surrender of export proceeds. For details see M. D. Chinn, H. Ito: A New Measure of Financial Openness, 2007, mimeo.

Figure 4
De jure Financial Integration in Selected Emerging Markets, 1985-2005



Independent floaters: Brazil, Chile, Indonesia, Israel, Korea, Mexico, Philippines, Poland (starting 1998), South Africa, Turkey. Managed floaters: Columbia, Czech Republic (starting 1998), India, Malaysia, Peru, Russia (starting 1998), Thailand. Pegged regimes: Argentina, China, Egypt, Hungary (starting 1998), Jordan, Morocco, Pakistan.

Sources: M. D. Chinn, H. Ito: A New Measure of Financial Openness, 2007, mimeo; IMF; authors' calculations.

ing portfolio optimisation strategies by private agents.¹¹ By contrast, changes in the structure of foreign assets and liabilities of emerging economies suggest that the private and the public sectors have aimed at reducing traditional vulnerabilities to sudden stops and reversals of capital flows.¹² On the liability side of their international investment position, emerging markets have been recording a significant shift from debt to equity instruments, as FDI has been recording a substantially larger and increasing share of total foreign liabilities. On the asset side, claims by central banks, i.e. foreign exchange reserves, and sovereign wealth funds have been increasing rapidly. Finally, emerging markets have seen substantial improvements in current account balances and the net foreign asset position.¹³ By contrast, current account balances and the net foreign asset position of advanced economies, mainly but not exclusively driven by the United States, have deteriorated (Figure 6).¹⁴

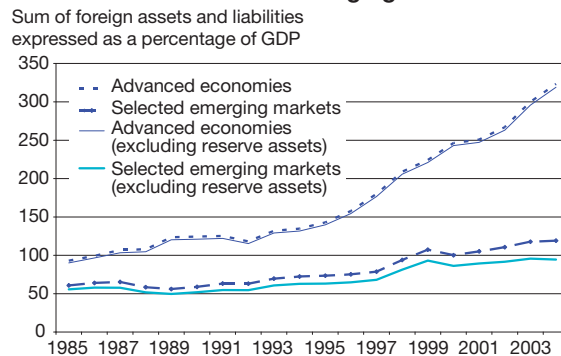
¹¹ See F. Fecht, H-P. Grüner, P. Hartmann, M. Lo Duca: Financial Globalization and Stability, Frankfurt a.M. 2007, mimeo.

¹² See S. Edwards: Capital controls, capital flow contractions, and macroeconomic vulnerability, in: Journal of International Money and Finance, Vol. 26, No. 5, 2007, pp. 814-840; M. A. Kose, E. S. Prasad, M. E. Terrones: How Does Financial Globalization Affect Risk Sharing? Patterns and Channels, IMF Working Paper 07/238, Washington DC 2007; P. Lane, G. M. Milesi-Feretti: The Drivers of Financial Globalization, IIS Discussion Paper 238, Dublin 2008.

¹³ Again, the new EU member states and the candidate and potential candidate countries in south-east Europe have been major exceptions.

¹⁴ Other advanced economies with large (above 5% of GDP) and widening current account deficits in recent years include Iceland, Greece, Portugal, New Zealand, Spain and Australia.

Figure 5
De facto Financial Integration in Advanced Economies and Emerging Markets



Sources: P. Lane, G. M. Milesi-Feretti: The External Wealth of Nations Mark II, IMF Working Paper 06/69, Washington 2006; authors' calculations.

Monetary Policy

There is widespread agreement that price stability is the main objective of monetary policy. Emerging markets have been quite successful in meeting this objective as inflation rates in emerging markets have been converging to moderate levels since 2002 (Figure 7). Moreover, a moderate level of inflation has been a feature of the emerging market world, irrespective of the exchange rate regime chosen.¹⁵

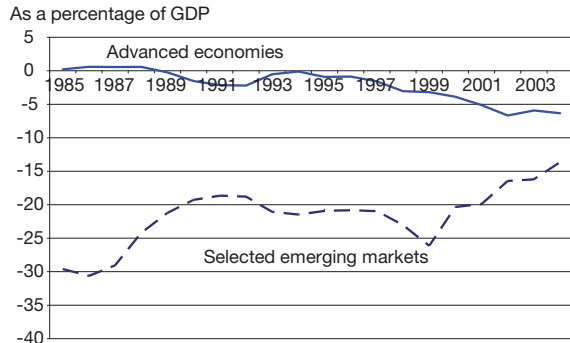
In countries operating a soft peg, the contribution of monetary policy to achieving and maintaining price stability is set to be limited as – with an open capital account – domestic interest rates have to follow movements in the respective anchor country. However, as demonstrated above, capital accounts have not been that open. Authorities have been using various instruments, including outright administrative measures, sterilised interventions and changes in minimum reserve requirements, to allow for a certain degree of monetary policy independence. While the collateral damage of these measures for other policy areas, in particular financial development and integration, should not be neglected,¹⁶ the evidence suggests that the approach has been reasonably successful in mitigating inflationary pressures. Finally, fiscal policy has been used as a macroeconomic policy tool to contain domestic imbalances.¹⁷

¹⁵ See W. A. White: Globalisation and the determinants of domestic inflation, BIS Working Papers No. 250, Basle 2008.

¹⁶ See J. Aizenman, R. Glick: Sterilization, Monetary Policy and Global Financial Integration, NBER Working Paper No. 13902, Cambridge MA 2008.

¹⁷ See M. S. Mohatny, M. Scatigna: Has globalization reduced monetary policy independence?, in: Globalisation and monetary policy in emerging markets, BIS paper No. 23, Basle 2005, pp. 17-58; R. S. Cardarelli, S. Elekdag, A.A. Kose, op. cit.

Figure 6
Net Foreign Asset Position – Advanced and
Selected Emerging Market Economies,
1985-2004



Sources: P. Lane, G. M. Milesi-Feretti: *The External Wealth of Nations Mark II*, IMF Working Paper 06/69, Washington 2006; authors' calculations.

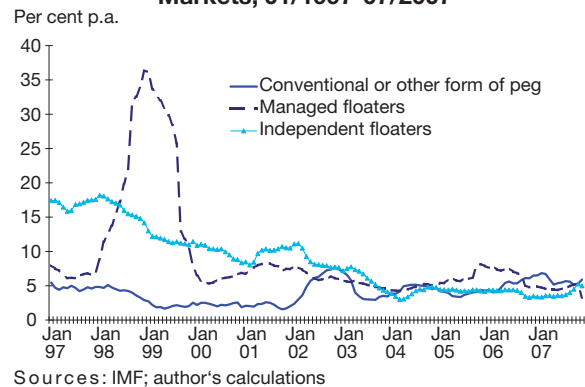
The main contribution of emerging markets to the global convergence of inflation since the end of the 1990s has been made by emerging markets with a managed and independent float allowing authorities to conduct a monetary policy different from those prevailing in the USA or the euro area. For example, in Brazil and Turkey, where inflation has been declining from elevated levels, the disinflation process has been characterised by nominal and real interest rates substantially higher than rates observed in advanced economies. Moreover, both countries have been recording significant fluctuations in the exchange rate.

The focus on price stability as the main objective of monetary policy has been underlined by the adoption of a domestic nominal anchor. An inflation targeting regime was adopted in eleven of the fourteen emerging market countries under review operating a managed or independently floating exchange rate regime.¹⁸ Empirical evidence suggests that inflation targeting has helped countries achieve lower inflation, even though the evidence is mixed on whether inflation performance has been better than in a control group of countries operating under a different monetary framework.¹⁹

¹⁸ Turkey officially adopted an inflation targeting regime at the beginning of 2006 after several years of an informal inflation targeting approach following the 2001 financial crisis. India, Malaysia and Russia are the three emerging market countries in the sample that operate neither a soft peg nor an inflation targeting monetary policy framework.

¹⁹ IMF: *Does Inflation Targeting Work in Emerging Markets?*, in: *World Economic Outlook*, Washington DC, September 2005, pp. 161 – 186; S. Edwards: *The relationship between exchange rates and inflation targeting revisited*, NBER Working Paper No. 12163, Cambridge MA, 2006. F. S. Mishkin, K. Schmidt-Hebbel: *Does Inflation Targeting Make a Difference?* NBER Working Paper No. 12876, Cambridge MA 2007.

Figure 7
Inflation Developments in Selected Emerging
Markets, 01/1997-07/2007



Sources: IMF; author's calculations

With price stability as the main goal of monetary policy and a managed or independently floating exchange rate regime, the monetary framework of the respective emerging market economies closely resembles the one characterising advanced economies. Some emerging market central banks, like the Bank of Israel, have refrained from interventions in the foreign exchange market for a very long time. Moreover, with the great moderation – or, to put it in the terminology of the optimum currency area theory, in the absence of country-specific shocks – the need for a monetary policy stance substantially different from the one in advanced economies had been rather low in recent years. As a result, interest rates in several countries operating an inflation targeting regime have been following those in advanced economies rather closely. For example, Chile and Mexico had a pattern of interest rates very similar to the one recorded in the United States, while exchange rates and foreign exchange reserves had been broadly stable.

Against this backdrop, some observers have been arguing that the global monetary system is increasingly populated by emerging market countries which have little need for anchor currencies or coordination in monetary policy and exchange rate policy.²⁰ Thirty-five years after the breakdown of the old Bretton Woods system of fixed exchange rates, emerging markets are pursuing the same path advanced economies have been taking since the mid-1970s, namely adopting flexible exchange rates, opening up the capital account and pursuing a stability-oriented domestic monetary policy. As a result, the emerging global monetary system will have all the features of a “Bretton Woods reversed”.

²⁰ See A. Rose: *A Stable International Monetary System Emerges: Inflation Targeting is Bretton Woods Reversed*, NBER Working Paper No. 12711, Cambridge MA 2006.

In general, however, most studies on monetary policy in emerging markets with a managed or independent float indicate that there are still substantial differences in monetary policy conduct compared with advanced economies. For example, interventions in the foreign exchange markets are still frequent. This holds – by way of definition – for inflation targeters with a managed float,²¹ and also for countries classified as independently floating.²² Moreover, results of econometric studies suggest that emerging-economy inflation targeters do take exchange rate behaviour into account when conducting monetary policy as part of the monetary policy reaction function.²³ This also holds for countries with a managed float but no explicit domestic anchor, which allows them to take an eclectic approach to monetary and exchange rate policy.²⁴

Based on this evidence, and also taking into account those countries operating a soft peg, the global monetary system has been characterised as an informal remake of the pre-1973 system of fixed exchange rates. In the new “Bretton Woods II”, the core – the United States – is linked with the periphery, mainly consisting of the emerging Asian economies, through pegged or managed exchange rates, reserve accumulation and current account imbalances.²⁵ Similar developments

have been identified in Europe, where – despite very different current account patterns compared with the USA and emerging Asia²⁶ – countries in the “EMU periphery” have been on the “Euro standard”.²⁷

The contradictory interpretations of emerging markets’ participation in the global monetary system derive from the fact that emerging markets – based on an overall cautious approach towards financial integration – have been achieving rather similar macroeconomic results, namely low inflation and a comparatively high degree of exchange rate stability, despite operating very different exchange rate regimes. However, there are increasing signs that this period of smoothly combining domestic and external stability may come to an end.

How Sustainable is the Current Configuration of the Global Monetary System?

Over the past few years, emerging markets have seen strong growth. While there is no direct and causal link between the way emerging markets have been participating in the global monetary system and their growth performance, from a growth perspective, there is little reason to argue for substantial changes either. Thus, the main questions are whether the current system is sustainable and – if it is not sustainable – to where the system will be heading.

Concerns about the sustainability of the current configuration of the global monetary system have been raised for many years, most prominently in the context of the “global imbalances” debate. At the heart of concerns lies the notion that, at a certain deficit level, investors, including central banks, might stop accumulating financial assets issued by the respective debtor countries. This will force a rapid adjustment of interest and exchange rates triggering a current account reversal via substitution and income effects. Other observers – while agreeing that imbalances of the magnitude observed in recent years cannot be sustained forever – have argued that current account imbalances and the associated accumulation of foreign exchange reserves have been a symptom of the global monetary system as it has been emerging since the crises in the late 1990s, rather than being the cause of its demise.²⁸

²¹ Of the ten emerging market countries that have adopted inflation targeting since end-2001, only three, namely Indonesia, Philippines and Turkey, have been classified as independently floating, while seven have been classified as managed floaters or soft pegs (Ghana, Peru, Romania and Serbia operate a managed floating regime; Slovakia is a member of ERM II; Botswana and Guatemala are each operating a crawling and conventional peg). There is no advanced economy operating a managed float regime.

²² This behaviour does not necessarily imply “fear of floating”. It may also reflect the inflation response to exchange rate shocks – albeit declining – still being much larger in emerging economies than in advanced ones. The very fact that emerging-economy inflation targeters have been successful in achieving their targets in recent years supports this interpretation. See also F. S. Mishkin, K. Schmidt-Hebbel, *op. cit.*

²³ See S. Edwards: The relationship between ..., *op. cit.* In addition, emerging markets with a managed and independent float are both *de jure* and *de facto* much less financially integrated than advanced economies. This might explain that the domestic interest rate in emerging-economy inflation targeters is much less affected by foreign interest rate shocks than are the domestic rates of advanced economies; see F. S. Mishkin, K. Schmidt-Hebbel, *op. cit.*

²⁴ See, for example, C. F. Kramer, H. K. Poirson, A. Prasad: Challenges to Monetary Policy from Financial Globalization: The Case of India, IMF Working Paper No. 131, Washington DC 2008.

²⁵ See M. P. Dooley, D. Folkerts-Landau, P. M. Garber: An Essay on the Revived Bretton Woods System, NBER Working Paper No. 9971, Cambridge MA 2003.

²⁶ See A. Abiad, D. Leigh, A. Mody: International Finance and Income Convergence: Europe is Different, IMF Working Paper No. 64, Washington DC 2007; and S. Herrmann, A. Winkler: Financial markets and the current account – emerging Europe versus emerging Asia, Deutsche Bundesbank Discussion Paper Series 1: Economic Studies, Frankfurt a.M., May 2007.

²⁷ See R. McKinnon: The Euro versus the Dollar, Resolving a Historical Puzzle, in: *Journal of Policy Modeling*, Vol. 24, No. 4, 2002, pp. 355-359; and G. Schnabl: Exchange Rate Volatility and Growth in Small Open Economies at the EMU Periphery, ECB Working Paper No. 773, Frankfurt a.M. 2007.

²⁸ See M. Dooley, P. Garber: Is It 1958 or 1968? Three Notes on the Longevity of the Revived Bretton Woods System, in: *Brookings Papers on Economic Activity*, No. 1, 2005, pp. 147-187.

EXCHANGE-RATE REGIMES

Table 2
Selected Emerging Markets – Inflation Differentials vis-à-vis the USA and the Euro Area
(percentage points)

	2007 July	2007 Sept	2007 Nov	2008 Jan	2008 Mar	2008 May	2008 Jul
China	3.2	3.4	2.6	2.8	4.3	3.5	0.7
India	4.5	3.0	0.8	0.6	2.0	2.6	..
Indonesia	3.7	4.2	2.4	3.1	4.2	6.2	6.3
Korea	0.2	-0.4	-0.8	-0.4	0.0	0.7	0.3
Malaysia	-0.7	-0.9	-2.0	-2.0	-1.2	-0.4	2.9
Pakistan	4.0	5.6	4.4	7.6	10.1	15.1	18.7
Philippines	0.2	-0.1	-1.1	0.6	2.4	5.4	6.7
Thailand	-0.6	-0.7	-1.3	-0.0	1.3	3.4	3.6
Russia	6.4	6.6	7.2	8.3	9.4	11.0	9.2
Turkey	4.5	4.4	4.1	3.9	5.2	6.6	6.5
South Africa	4.7	4.4	4.1	5.0	6.6	7.5	7.8
Argentina	6.3	5.8	4.2	4.0	4.8	4.9	3.5
Brazil	1.4	1.4	-0.1	0.3	0.7	1.4	0.8
Chile	1.5	3.1	3.1	3.2	4.5	4.7	3.9
Columbia	3.4	2.2	1.1	1.7	1.9	2.2	1.9
Mexico	1.8	1.0	-0.4	-0.6	0.3	0.8	-0.2
Peru	-0.2	0.0	-0.8	-0.1	1.6	1.2	0.2
Czech Republic ¹	0.5	0.7	1.9	4.3	3.5	3.1	2.8
Hungary*	6.6	4.3	4.1	3.9	3.2	3.3	2.7
Poland*	0.5	-0.0	0.3	1.0	0.7	0.8	0.9
Egypt	5.4	6.5	2.6	6.2	10.4	15.5	16.6
Israel	-2.1	-1.4	-1.5	-0.7	-0.2	1.3	-0.8
Jordan	1.3	1.5	1.0	1.4	10.1	11.5	13.8
Morocco	0.1	-0.4	-2.9	-2.6	-0.8	1.2	..

¹ Inflation difference to the euro area.

Sources: IMF; Haver Analytics; Eurostat; national sources.

The sustainability of global imbalances has been up for debate for a very long time. The recent financial turmoil has added a new dimension to it, as the link between both events has come under increasing scrutiny.²⁹ Instead of contributing to this debate, we would like to focus on a different but related challenge to the current configuration of the global monetary system, namely the increasing divergence of inflation between advanced and several emerging economies that has been observed over the past year (Table 2). At the heart of this challenge are the possible monetary and exchange rate policy implications for emerg-

ing markets if this inflation difference to advanced economies were to persist or even widen.

There are a few factors explaining why prices have recently been rising in emerging markets at a more rapid pace than in advanced economies.

- The rise in energy and food prices. While higher food and energy prices, themselves driven by strong demand from emerging markets after several years of rapid growth, have been a global phenomenon, the impact on inflation has been non-proportional. This is because both items account for a much larger share of the consumer price indices in emerging economies than they do in advanced economies.
- Strong expansion in monetary and credit aggregates. After several years of substantial capital inflows and – increasingly non-sterilised³⁰ – central bank interventions in the foreign exchange markets,

²⁹ Early warnings were issued already at the beginning of this decade. More recently, concerns have also been expressed about rising current account deficits in the new EU Member States and EU candidate and potential candidate countries. See C. L. Mann: Is the U.S. Current Account Deficit Sustainable? in: Finance & Development, Vol. 37, No. 1, 2000, pp. 42-45; J. A. Holman: Is the Large U.S. Current Account Deficit Sustainable, in: Economic Review, Federal Reserve Bank of Kansas City, First Quarter, 2001, pp. 5-23; B. Eichengreen, O. Choudhry: Managing Capital Flows: Eastern Europe in an Asian Mirror, University of California, Berkeley, 2005, mimeo; A. Banerji, J. Kähkönen: Real Convergence and the Balance of Payments, in: R. Martin, A. Winkler (eds.): Real convergence in central, eastern and south-eastern Europe, Houndmills and New York, Palgrave MacMillan, 2008, forthcoming.

³⁰ See C. M. Reinhart, V. R. Reinhart: Capital Inflows and Reserve Accumulation: The Recent Evidence, NBER Working Paper No. 13842, Cambridge MA 2008.

monetary and credit expansion³¹ may finally lead to a more pronounced rise in emerging market inflation.

- Increasing supply constraints, given several years of strong growth. There are signs that the elasticity of the supply side to rising demand may have declined, as excess supply in the global labour market, symbolised by the “vast supply of underemployed workers” in China and other emerging market economies, may have been soaked up, at least for certain segments of the market. In combination with the rise in food and energy prices, this may make emerging market economies more susceptible to second-round effects.

There have been rising inflationary pressures in advanced economies as well. And until July last year, the Federal Reserve and the ECB responded to these pressures by raising interest rates. After the recent financial turbulence, however, monetary policy rates in the euro area have been raised only marginally, while the US Federal Funds rate has dropped significantly. The policy response reflects the high level of uncertainty resulting from the turmoil in the financial markets and past experience indicating a slowdown of economic activity in the aftermath of financial turbulence and the associated impact on inflation developments.

Accordingly, the sustainability of the current configuration of the global monetary system will crucially depend on whether emerging markets will continue to be able to contain inflationary pressures by other means than monetary and exchange rate policies, as the monetary policy stance in the USA and the euro area is looking increasingly inappropriate for emerging market economies, given rising inflation and strong growth.³² Thus, emerging markets would face a similar situation as in the crisis-prone 1990s, namely a rising inconsistency between domestic and external stability. In countries operating a soft peg, this inconsistency could trigger a change in the exchange rate regime. In emerging markets with a domestic nominal anchor, there could be an end to the period of smooth coexistence between meeting the inflation targets and a high degree of exchange rate stability. Indeed, some countries have been already responding to the

surge in inflation by allowing for greater exchange rate flexibility vis-à-vis their traditional anchor currency to contain inflationary pressures (e.g. China, Russia, Brazil), while others have become increasingly concerned with a too rapid pace of exchange rate appreciation and have been intervening in the foreign exchange market (e.g. Chile).

The sustainability of the current configuration of the global monetary system will also be closely linked to the extent with which emerging markets will be able to “decouple” from economic developments in advanced economies, notably the United States. In terms of global growth, the “decoupling hypothesis”³³ has a positive connotation, as – if true – the global expansion of the past few years could continue even in the face of a US slowdown. From a global monetary system perspective, however, the decoupling scenario raises the risk that the monetary policy stance in advanced economies might become increasingly inconsistent with maintaining price stability in emerging markets operating a peg or a managed float.

Outlook for the Global Monetary System

The jury is still out on whether, and to what extent, decoupling will take place. Recent data suggest that there is divergence, while the degree of decoupling is likely to be limited. However, irrespective of the more cyclical challenges the system is currently facing, there are some arguments to suggest that tensions between price and exchange rate stability might become more fundamental.³⁴ On the one hand, reflecting the ideas of the more traditional optimum currency area theory, the rapid integration of emerging markets into the global economy raises demand for a common monetary standard. This would mean that emerging markets would continue paying close attention to the exchange rate and exchange rate developments, particularly with regard to the major currencies, i.e. the US dollar and the euro.³⁵

On the other hand, in an increasingly integrating world, the global economy might need more exchange rate flexibility in dealing with large shifts in relative prices that affect advanced and emerging countries

³¹ Credit growth has exceeded 20% per annum in every major region of the developing world in recent years. See W. A. White, *op. cit.*

³² Of course, this may also apply to emerging economies other than the 24 countries reviewed here. With regard to the oil-producing countries in the Middle East see B. Setser: *The Case for Exchange Rate Flexibility in Oil-Exporting Economies*, Peterson Institute for International Economics, Policy Brief 07-8, Washington DC 2007.

³³ See T. Helbling, P. Berezin, M. A. Kose, M. Kumhof, D. Laxton, N. Spatafora: *Decoupling the Train? Spillovers and Cycles in the Global Economy*, in: *World Economic Outlook*, Washington DC, April 2007, pp. 121-160; C. Akin, M. A. Kose: *Changing Nature of North-South Linkages: Stylized Facts and Explanations*, IMF Working Paper 07/280, Washington DC 2007.

³⁴ See M. Bordo, H. James: *One World Money, Then and Now*, NBER Working Paper 12189, Cambridge MA 2006.

differently. The recent rise in food and energy prices provides a prominent example of substantial movements in relative prices and their non-proportional impact on advanced and emerging economies. In such an environment, differing interest rate levels are needed to maintain price stability in the global economy. While interest rates in advanced economies would remain at comparatively low levels, significantly higher interest rate levels would be required in emerging markets, given their high rates of growth.³⁵ Assuming that it will become increasingly challenging to limit and deal with capital inflows by administrative measures and changes in minimum reserve requirements, interest rate differentials can be achieved only by emerging markets moving towards more flexible exchange rates.³⁷

To a European observer, both arguments look familiar. They have been at the heart of the discussion on European monetary and exchange rate policies since the collapse of the old Bretton Woods system.³⁸ And in the 26 years that followed before the creation of the euro, European countries tried almost any possible exchange rate regime to cope with the challenge of conducting independent monetary policies on an increasingly integrated continent. In the end, both “corners” prevailed: a hard peg among European

countries, and the euro area itself operating an independent float.³⁹

On a global scale, the prospects for monetary unions in other parts of the world are very limited, despite substantial efforts, most prominently in the Gulf Cooperation Council, and calls for further monetary cooperation in other regions.⁴⁰ Thus, the global monetary system of the future will probably consist of more emerging markets adopting a domestic nominal anchor and a more flexible exchange rate regime. The main advantage of such a step is a rise in flexibility to adjust to forces that impinge on emerging market economies’ monetary policy in their process of convergence and integration. At the current juncture, such a need for flexibility might arise if countries were to face increasing inflationary pressures.

At the same time, it is unlikely that the global monetary system will soon be characterised by “monetary fragmentation”⁴¹ with most emerging market countries operating a pure independent float. Adjustment via the exchange rate will remain gradual and more the exception than the rule, as authorities in emerging markets will continue to rely first on fiscal policy, minimum reserve requirements and other administrative measures to contain inflationary pressures. This is because the forces of real and financial integration that have been driving the global monetary system towards more – rather than less – exchange rate stability over the past few years will remain strong.⁴² Moreover, experience suggests that – if properly managed – they have been associated with favourable economic outcomes, especially in terms of growth, in the emerging market world.

³⁵ The more recent discussion on whether an increasingly integrated world requires a more cooperative monetary policy setting is a more modern version of the same theme. Most models show that the gains from more explicit monetary policy cooperation among advanced economies are so small that they should be ignored in practice. However, some models also indicate that results may differ when the countries involved show a higher degree of real openness, measured as the share of imports to GDP, and a lower degree of financial integration than the USA and the euro area. Many emerging markets are characterised by these features: they are much more open to trade than the huge currency areas in the United States and in Europe, and – as demonstrated – much less financially integrated. See K. Rogoff: Impact of Globalization of Monetary Policy, Paper prepared for the symposium sponsored by the Federal Reserve Bank of Kansas City on “The New Economic Geography: Effects and Policy Implications”, Jackson Hole, Wyoming, 24–26 August 2006; J. B. Taylor: The Impacts of Globalization on Monetary Policy, Paper prepared for presentation at the Banque de France Symposium on “Globalization, Inflation and Monetary Policy”, Paris, 7 March 2008; G. Coenen, G. Lombardo, F. Smets, R. Straub: International transmission and monetary policy cooperation, Paper presented at the National Bureau of Economic Research Conference on International Dimensions of Monetary Policy 11–13 June 2007, S’Agaró, Catalonia, Spain.

³⁶ See also L. Bini Smaghi: Real and nominal convergence: policy challenges, Speech delivered at the Conference on European Economic Integration 2007 Currency and Competitiveness, Oesterreichische Nationalbank Vienna, 20 November 2007, <http://www.ecb.int/press/key/date/2007/html/sp071120.en.html>.

³⁷ See also B. Eichengreen, R. Razo-Garcia: The international monetary system in the last and next 20 years, in: *Economic Policy*, Vol. 21, No. 47, 2006, pp. 393–442.

³⁸ A comparison of the later years of the Bretton Woods system with the current configuration of the global monetary system – taking an emerging market perspective – has been provided by M. Dooley and P. Garber, op. cit.

³⁹ See T. Padoa-Schioppa: The Genesis of EMU: A Retrospective View, Robert Schuman Lecture given at the Sixth Session of the Academy of European Law on 29 June 1995 at the European University Institute, 1995, http://www.eui.eu/RSCAS/WP-Texts/JM96_40.html; in the light of this, it is not surprising either to observe that there are differing exchange rate regimes among the new EU member states which have not yet adopted the euro. Moreover – as the recent move by Hungary, abolishing its peg with a horizontal band, shows – the exchange rate regimes may change over time. However, given that real and financial integration in the EU is already strong and is set to increase even further, countries are expected to adopt the euro once they are deemed to have fulfilled the conditions set by the Treaty.

⁴⁰ See the overview provided in ECB: Economic integration in selected regions outside the European Union, *Monthly Bulletin*, October 2004, pp. 67–84.

⁴¹ The term has been introduced by A. S. Posen: Why the Euro will Not Rival the Dollar, in: *International Finance*, Vol. 11, No. 1, 2008, pp. 75–100.

⁴² See A. Barajas, L. Erickson, R. Steiner: Fear of Declaring: Do Markets Care What Countries Say About Their Exchange Rate Policies?, Paper presented at the 8th Jacques Polak Annual Research Conference, 15–16 November 2007; and M. P. Dooley, D. Folkerts-Landau, P. M. Garber: Will Subprime be a Twin Crisis for the United States?, NBER Working Paper No. 13078, Cambridge MA 2008.