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Currency Trading and International Financial Instability

During the past year, global capital markets have experienced an unprecedented series of financial turmoils. Asian contagion, Russia's default and the collapse of the US hedge fund Long Term Capital Management (LTCM) are the low points of this development. As recent events in Latin America and elsewhere indicate, there is no prospect that markets worldwide will lastingly calm down soon. There is an abundance of proposals and suggestions on how the system should be stabilised. The most popular among them include the control of capital flows and hedge-fund activities. The following article draws attention to another element of financial instability which at times triggers, at times fuels, a crisis: expectation-driven foreign exchange transactions.

Since the days of the Bretton Woods system of fixed exchange rates and strongly limited capital mobility, global finance has undergone dramatic changes. Today's markets worldwide are largely liberalised and governments, banks and companies from developed and emerging economies alike are able to raise money abroad in ever more sophisticated forms. As a result, international capital flows are much larger than in former times and the quantities of money at risk worldwide are much greater. This produces at least three interrelated problems.

First, low interest rates and few attractive investment opportunities in industrial countries in recent years made international investors increasingly turn to the emerging markets of Asia, Latin America and Eastern Europe. The bulk of those investments are of a short-term nature and can be withdrawn easily at the slightest sign of turmoil. This is making the countries' economies very exposed to capital flight. Second, there is the risk of contagion which does not stop at the doors of the developed world. Experience has shown that, after the outbreak of a crisis, investors tend to cease discriminating between countries, fleeing them one after another without further consideration. When the Thai baht came under pressure in early 1997 it took only a few months for the crisis to spread to most other Asian countries,¹ and its effects were felt in Russia and Latin America,

and even in markets in Western Europe and the United States.

The third problem in this context is derivatives trading. Derivatives are instruments whose value is based on an underlying cash market in stocks, currencies, interest rates or commodities. Swaps, futures and options allow institutions to gain leverage and take large market positions with a relatively small capital base. Leverage increases the institutions' exposure to large movements in market prices making them extremely vulnerable to financial crises. Regulators in this respect focus in particular on one group of market participants, the hedge funds, which due to a combination of attributes arouse special concern.² On the one hand, hedge funds are subject to little or no direct regulatory oversight. Operating mostly through offshore centres, they are structured as limited partnerships with investors being institutions and wealthy individuals and securities issued in the form of private placements. On the other hand, hedge funds are subject to very limited disclosure requirements compared, for example, to banks and other publicly traded companies, and they are not rated by credit-rating agencies which further adds to the intransparency in this realm.

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¹ For a detailed analysis of the effects of the crisis in Asia see the contributions in: Lukas Menkhoff, Beate Reszat (eds.): Asian Financial Markets – Structures, Policy Issues and Prospects, Nomos, Baden-Baden 1998.

² See Basle Committee on Banking Supervision: Banks' Interaction with Highly Leveraged Institutions, Basle, January 1999, p. 8.

All this helps explain why recent ideas about regulatory steps to contain international financial instability largely concentrate on short-term flows and hedge-fund activities. However, neither of these lies at the heart of the problem. Hedge funds make for only a small part of the financial community,³ and short-term capital movements – leveraged or not – are often only a reaction to developments in other market segments, notably on the currency front. With respect to the latter, a distinction has to be made between the situation of an individual country such as Korea, Thailand or Brazil, whose financial position may become rather precarious when international investors start panicking, and the overall effects of a crisis on the world financial system, which to a large extent depend on how far the country's currency is involved.

Very often, mounting pressures on a currency, which sooner or later may end up in a free fall of the exchange rate, mark the beginning of a financial crisis and fuel investors' panic in its further course. The higher the pressures on the currency, the stronger the vicious circle of successive rounds of depreciation, domestic failures, economic worsening and investors panicking, the longer will the financial crisis last, the deeper will it be and the greater is the danger of contagion. The sooner exchange-rate expectations turn again, the higher is the chance that the crisis will stay a local phenomenon. Thus, influencing exchange-rate expectations and/or curbing excessive trading in a currency becomes a matter of utmost urgency once crisis has struck. The question is: whose expectations and whose trade?

Plus ça change ...

Observers and analysts often stress how much financial markets have changed in recent years. There are new regions and countries opening up their markets, new global players such as financial institutions from emerging markets, transnational corporations and institutional investors, new technologies and ever more sophisticated financial instruments. But they tend to overlook how much, at least in currency trading, market mechanics have stayed the same since the early days. The bulk of trade in the foreign exchange market is still in traditional foreign exchange instruments, that is spot transactions, outright forwards and swaps. In April 1998, global average daily turnover in this market was estimated at US\$ 1,490 billion. Over-the-counter (OTC) derivatives other than the traditional instruments (i.e. currency swaps and options) were US\$ 97 billion – a small fraction of overall trading (Table 1). Above all, what

Table 1
Daily Global Foreign Exchange Turnover
(in billions of US dollars)

Category	April 1989	April 1992	April 1995	April 1998
Traditional foreign exchange instruments	590	820	1,190	1,490
• Spot transactions ¹	350 (59)	400 (49)	520 (44)	590 (40)
• Outright forwards and forex swaps ¹	240 (41)	420 (51)	670 (56)	900 (60)
Other foreign exchange derivative instruments	-	-	45	97

¹ In parantheses: percentage shares.

Source: Bank for International Settlements: Central Bank Survey of Foreign Exchange and Derivatives Market Activity in April 1998: Preliminary Global Data, Press Release, Basle, 19 October 1998.

has changed is market volume, which grew dramatically over the last decade – far more than international trade and direct investment. In 1985, daily average turnover was an estimated \$150 billion, and this was already double the volume of five years before.⁴ This growth is one reason why the markets have become more and more volatile, and why traditionally assumed textbook links between exchange rate movements and fundamental economic data are ever harder to nail down.

The divide between 'normal' and 'excessive' trading is hard to tell. In principle, 'excessive' refers to some form of currency speculation. There is widespread agreement that speculation has a useful function in adding liquidity to a market in normal times. But there is equal unanimity that, in the fragile environment on the brink of a financial crisis, its effects can become disastrous. In principle, currency speculation, i.e. trading with exchange-rate expectations as the sole motivation,⁵ can be done in all three traditional foreign exchange instruments. In order to see how this works it is necessary to have a closer look at the basics of foreign exchange trading.

³ Hedge funds are dwarfed by other institutional investors such as pension funds or mutual funds. For example, in the third quarter of 1997, at the height of the Asian crisis, their capital was some US\$ 100bn, compared to the more than US\$ 20,000bn held by other institutional investors. See Robert Chote: Investment Pools 'Late to Take up Positions', in: Financial Times, 17 April 1998. And even in the derivatives trade which is dominated by a narrow group of large banks, hedge funds play only a minor role. Compare Laurie Morse and Tracy Corrigan: Bankers Brush Aside Fears of Threat from Derivatives, in: Financial Times, 22 July 1993. Thus, it is rather the fact that big international banks irresponsibly take large risks in their interactions with hedge funds thereby endangering the financial system as a whole which gives rise to concern.

⁴ Compare Adrian Hamilton: The Financial Revolution, Harmondsworth 1986, p. 51.

A spot transaction is an exchange of two currencies for settlement within two business days. A dealer who buys US dollars against euro spot has an open position in dollar which is exposed to the risk of a change in the exchange rate as long as there is no matching position such as a due dollar payment of equal amount. When the dollar rises against the euro the position can be sold at a higher price. Therefore, if the dollar is expected to rise people may become tempted to buy dollars spot and hold them until their expectations prove right – or wrong. In this, they are not bound to the period of two days. If the exchange rate rises in between, the position can be closed instantaneously by selling the dollars again.

Using spot transactions for currency speculation can become a costly matter for those who are not directly participating in the market because in this case it requires liquidity. For direct market participants such as banks and other financial institutions the situation looks different. When they buy a currency in the interbank market holding it for a short time during the day or overnight, and then sell it again, due to

established customs it is only the difference, i.e. the gain or loss, that has to be paid. This gives them a high degree of flexibility.

An alternative for bank customers who in a spot transaction have to pay fully for a currency they want to hold is a forward transaction. This is an exchange of two currencies for more than two business days at a rate fixed at the time the transaction is agreed with maturities stretching days, months or even years into the future. There are specific exchange rates for each forward maturity. Again, as long as there is no matching position of equal amount and maturity, but of opposite sign, in the same currency there is an exposure towards risk which can be exploited for currency speculation. Forward transactions have the advantage that in this market – comparable to the interbank spot market – generally no accounts are debited or credited, that is no money actually changes hands, until the maturity date. Their main disadvantage is low flexibility. Due to the longer period the risk of inverse price movements is higher. In addition, in practice, forward contracts are mostly tailor-made to meet customers' needs with non-standard amounts or maturities which makes it difficult to unwind exposures. And a smaller number of participants and lower volumes in this market segment 'imply somewhat less competitive pricing'.⁶

Both spot and forward positions need not be closed at maturity but can be prolonged by a transaction known as a foreign exchange swap. A swap is an exchange of two currencies for a specific period and a reversal of that exchange at the end of the period consisting either of a combination of a spot

⁵ There are several definitions of currency speculation. In what follows, a speculative foreign exchange position is one that is deliberately established or held without a respective matching position of equal amount and maturity, but of opposite sign, in the same currency. When positions are kept open for very short time-spans, dealers in this context also speak of "arbitrage". Initially, arbitrage defined a riskless activity to take advantage of differentials in the price of a currency in different markets. Nowadays, those occasions have become rare, and the bulk of "arbitrage" taking place means the exploitation of price differences in time which – albeit for minutes or hours – necessarily involves keeping the position open, i.e. exposed to currency risk.

⁶ Bank for International Settlements: Central Bank Survey of Foreign Exchange and Derivatives Market Activity 1995, Basle 1996, p. 17.

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and a forward leg or of two forward transactions with different maturities.⁷ For example, in a euro/dollar spot against forward swap transaction a dealer may buy the euro for in two days at an agreed spot rate selling it simultaneously back for in a week, a month, or three months. The loss or gain in this case is fixed and known: it is determined by the swap rate, i.e. the difference between the spot and the forward rate. Due to the high interdependence of money and foreign exchange markets worldwide, the swap rate is equal to the difference in the interest rates between the two currencies. Any deviations would instantaneously trigger interest rate arbitrage movements eliminating them again.

For example, if the interest differential were higher than the swap rate market participants in search of risk-free profits would have an incentive to raise funds in the market with the lower interest rate, swap them into the other currency, invest the amount for the respective period at the higher rate and then reverse the transaction at the end. The conditions of the reversal would be fixed at the beginning by the forward leg of the swap. The cost of this transaction would be the swap yield which is determined by the difference between spot and forward rate. Another possible strategy would be to raise funds at the higher interest rate, swap them into the lower-interest currency and invest them there. Since the swap yield is always paid to the buyer of the lower-interest currency the result should be the same. This relationship is known to all market participants, and prices are constantly adjusted correspondingly, so that those kinds of deviation are extremely rare.

Due to these close links to the money markets swaps are often considered as credit rather than currency instruments. A swap alone contains no foreign exchange risk. The dealer contracts both to pay and to receive the same amount of currency at specified rates. As the Bank for International Settlements puts it, 'Since currency risk is replaced by credit risk, the transaction is conceptually different from spot transactions'.⁸ As the Bank of England

emphasises in its latest foreign exchange and derivatives market survey, swaps are transactions, 'in which neither counterparty assumes currency risk. They are closely linked to money market deals ... and often used to hedge currency risk and manage liquidity.'⁹ For example, banks may hedge a forward transaction with a customer by combining a spot transaction with a swap. Investors may exploit market distortions and interest rate differences borrowing at low rates in one currency and swapping the amounts into another currency to finance investments there or to replace costly liquidity in one currency by cheap liquidity in another.¹⁰

But this does not mean that swaps are not used for currency speculation. The 'credit view' neglects the dual role swaps play in today's foreign exchange markets. With a swap currency risk can be replaced by credit risk, but, as already mentioned, it need not. In combination with a spot or outright forward position a swap enables the dealer to hold and prolong an open foreign exchange position and, at the same time, keep a highest possible flexibility. To cite the Bank for International Settlements once again, "...foreign exchange swaps are often initiated to move the delivery date of foreign currency originating from spot or outright forward transactions to a more optimal point in time. By keeping maturities to less than a week and renewing swaps continuously, market participants maximise their flexibility in reacting to market events."¹¹ This appears to be one reason¹² why the volume of swaps has risen so much in recent years – the years in which financial crises occurred ever more often and became ever more severe – and even replaced the spot market as the biggest foreign exchange market segment.

The Protagonists

Liquidity and cost considerations require a direct market access for most expectation-driven foreign exchange transactions – in particular, those extending over a short time horizon. The foreign exchange market is largely an interbank market. Interbank transactions account for 83 per cent of all transactions in

⁷ Foreign exchange swaps must not be confused with currency swaps which are a combination of interest rate and currency instruments. A currency swap consists of an exchange of streams of interest payments in different currencies for an agreed period of time and of principal amounts in different currencies at a pre-agreed exchange rate at maturity.

⁸ Bank for International Settlements, op.cit., p. 18.

⁹ Bank of England: The UK Foreign Exchange Market and Over-the-Counter Derivatives Markets in April 1998, London, 29 September 1998, p. 1.

¹⁰ In recent years, many yen/dollar transactions were done for these reasons. See also Beate Reszat: The Japanese Foreign Exchange Market, London 1997, p. 48.

¹¹ Bank for International Settlements, op.cit., p. 18.

¹² Although it is not the only one: for example, beside the mentioned hedging and money market transactions swaps are also used in a strategy known as swap-rate arbitrage, which is a technique for speculating on variations in the swap rate, i.e. the interest differential. See for the details Beate Reszat, op.cit., pp. 60 ff.

Table 2
Average Daily Turnover in the UK and the United States by Counterparty

(in billions of US dollars, in parantheses: percentage shares)

	UK		USA	
	1992	1998	1992	1998
Net turnover	290	637	167	351
of which				
• Interbank ¹	225 (78)	530 (83)	112 (67)	173 (49)
• Other financial institutions	42 (14)	61 (9)	31 (19)	107 (31)
• Non-financial customers	24 (8)	47 (7)	23 (14)	70 (20)

¹ For the UK cross-border plus net domestic interbank, for the USA reporting dealers.

Sources: Bank of England: The UK Foreign Exchange Market and Over-the-Counter Derivatives Markets in April 1998, London, 29 September 1998; Federal Reserve Bank of New York: Foreign Exchange and Interest Rate Derivatives Markets Survey Turnover in the United States, New York, 29 September 1998.

London, the world's leading centre of foreign exchange, where trading with other financial institutions is nine per cent and with non-financial customers only seven per cent (Table 2). In the United States, the Number Two in the world, the situation looks slightly different. Here, the share of interbank trading, which is traditionally lower than elsewhere, fell in recent years, which is mainly explained by a greater use of automated order-matching systems, and now makes up about 49 per cent, still leaving the banks as the largest group.

Banks trade mainly spots and swaps. Outright forwards account for only seven per cent of total turnover in London and 11 per cent in the United States. Most transactions are short-term by nature with the bulk of forward and swap maturities of seven days or less (Table 3). Although information is a scarce good in this area, taking risks seems to pay for the banks, in particular in times of turbulence. For example, most of the world's leading institutions could be seen making large profits on the currency front out of the Asian crisis as increases in foreign exchange trading revenues of American banks in the third quarter of 1997 demonstrate which in some cases ranged between 60 and 100 per cent (Table 4).¹³

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¹³ Besides, activities are not limited to emerging-market currencies. For example, when Deutsche Bank reported a 23 per cent jump in group net profit for 1993, this included a 76 per cent increase in earnings from proprietary trading, a success which probably owes much to the near-collapse of the European Exchange-Rate Mechanism that year. Compare: Wall Street Blues, in: Financial Times, 2/3 April 1994.

Table 3
Proportion of Gross Turnover in the UK and the USA by Transaction Type

(percentage of total turnover)

Instrument	UK		USA	
	1992	1998	1992	1998
Spot	52	35	57	42
Forwards	6	7	8	11
FX Swaps	42	58	35	47
Maturity of forwards ¹				
• up to and for 7 days	—	51	—	69
• 7 days and up to 1 year	—	13	—	30
• over 1 year	—	1	—	1

¹ For the UK outright and swaps, for the USA swaps only.

Sources: Bank of England: The UK Foreign Exchange Market and Over-the-Counter Derivatives Markets in April 1998, London, 29 September 1998; Federal Reserve Bank of New York: Foreign Exchange and Interest Rate Derivatives Markets Survey Turnover in the United States, New York, 29 September 1998.

Table 4
Third-Quarter 1997 Foreign Exchange Trading Revenues

(in millions of US dollars)

	Year to date 1997	Year to date 1996	% change
Citibank ¹	1,043.0	640.0	63
Chase ¹	572.0	341.0	68
Bank of America ¹	312.0	269.0	16
JP Morgan ¹	302.0	206.0	47
State Street	170.0	91.0	87
Bank of New York ²	87.0	43.0	102
Republic National	86.3	73.9	17
Northern Trust	77.8	42.7	82
Bank Boston	57.0	37.0	54

¹ Includes net interest income.

² Includes other trading income.

Source: Financial Times, 28 October 1997.

There is a long-standing debate about the nature of these revenues. The banks hint at the increase in customer trading in times of crisis. Rising volatility encourages speculators among their customers to bet on exchange rate moves, and companies and fund managers to rely more strongly on hedging. On the other hand, the comparably small share of customer trading in the market, and the sheer volume of market turnover compared to flows of trade and investment worldwide, indicate that this cannot be the whole story.

Whose transactions are driving the market? In foreign exchange interbank trading, concentration is high and the circle of protagonists is limited. There are

an estimated thirty to forty banks in the world which are internationally active in a narrow sense making two-way prices in multiple currency pairs in usually more than one trading centre. In London, the top ten banks account for more than 40 per cent of turnover,

Table 5
Top Ten in Foreign Exchange

Top ten by estimated market share (in %)	Who's best in London	Who's best in New York	Who's best in Tokyo
1 Citibank (8.54)	1 = HSCB	1 Chase Manhattan	1 Bank of Tokyo-Mitsubishi
2 Deutsche Bank (5.57)	2 = Citibank	2 Citibank	2 Chase Manhattan
3 Chase Manhattan (4.78)	2 = Chase Manhattan	3 = Bank of America	3 Sumitomo Bank
4 Goldman Sachs (4.04)	4 Deutsche Bank	3 = Merrill Lynch	4 Sanwa Bank
5 HSBC (4.00)	5 NatWest	5 Deutsche Bank	5 Industrial Bank of Japan
6 JP Morgan (3.05)	6 JP Morgan	6 HSBC	6 Citibank
7 SBC Warburg Dillon Read (2.69)	7 Barclays Capital	7 JP Morgan	7 JP Morgan
8 Merrill Lynch (2.65)	8 Royal Bank of Canada	8 SBC Warburg Dillon Read	8 HSBC
9 NatWest (2.60)	9 Merrill Lynch	9 = Commerzbank	9 = Fuji Bank
10 Industrial Bank of Japan (2.53)	10 Bank of America	9 = Goldman Sachs	9 = Sakura Bank

Source: Euromoney, May 1998.

Table 6
Top Ten in Emerging-market Currencies Trading

Asian currencies	East European currencies	Latin American currencies
1 Citibank	1 Citibank	1 Citibank
2 HSBC	2 Deutsche Bank	2 Chase Manhattan
3 Standard Chartered Bank	3 Chase Manhattan	3 Bank of America
4 = Chase Manhattan	4 JP Morgan	4 = Deutsche Bank
4 = Deutsche Bank	5 ABN Amro	4 = JP Morgan
6 ABN Amro	6 ING Barings	6 ABN Amro
7 = Crédit Agricole Indosuez	7 Merrill Lynch	7 Bank of Boston
7 = Bank of America	8 Société Générale	8 HSBC
9 Barclays Capital	9 HSBC	9 ING Barings
10 SBC Warburg Dillon Read	10 Bayerische Vereinsbank	10 Merrill Lynch

Source: Euromoney, May 1998.

the top twenty's share is 69 per cent. In the United States, the top five firms have a market share of 31 per cent.¹⁴ Concentration is even higher in trading in emerging-market currencies, the main targets of recent speculative attacks. In the US market, in April 1998, there were 15 dealers reporting transactions of \$250 million and more in Thai baht, 14 in Brazil real, five in Korean won, and only two in Chilean peso and Russian ruble respectively.¹⁵

The need for specialization explains why in those currencies transactions are mainly done by a small number of banks. Only the biggest institutions with the greatest financial strength can afford the risks in these narrow and often illiquid markets and this highly volatile environment. Although there are no direct data and at best anecdotal evidence of the activities of individual banks, some idea of the main protagonists can be gained from an annual foreign exchange poll conducted by the magazine Euromoney among banks' clients on the one hand, including individuals at industrial and commercial corporations, financial institutions and state agencies, and chief dealers and heads of foreign exchange on the other. The results indicate that the circle of institutions at the top is almost always the same. Table 5 shows the top ten financial institutions in foreign exchange ranked by market shares and those which are considered "best" in the main foreign exchange trading centres. Table 6 lists the top ten in trading in emerging-market currencies. Except for Tokyo, there is a small circle of western banks dominating the overall scene. Those, as well as a few others, are the obvious target group of policy efforts to cope with financial instability. It is the banks in this group which need to be integrated into a broader concept of international cooperation to contain financial crises. The question is what such a concept should look like.

Policy Implications

Among all financial market segments the foreign exchange market, and the constraints it places on monetary policy, is the most often cited example of how globalisation and financial integration challenge the sovereignty of national governments and regulatory authorities.¹⁶ In general, there are three kinds of

¹⁴ Bank of England, op.cit., p. 4; Federal Reserve Bank of New York: Foreign Exchange and Interest Rate Derivatives Markets Survey Turnover in the United States, New York, 29 September 1998, p. 2.

¹⁵ Federal Reserve Bank of New York, op.cit., Table A5.

¹⁶ See for this and the following Wolfgang H. Reinicke: Global Public Policy – Governing without Government?, Washington, D.C. 1998.

policy options to meet this challenge. The first is *defensive intervention*. Policymakers may try to maintain or resurrect barriers to globalisation through protectionism or other regulative measures. For example, after the outbreak of the Asian crisis countries with strongly regulated financial systems such as India which found their suspicion of freely flowing international capital confirmed by events suspended further plans for liberalisation, at least temporarily. Others, such as Malaysia, which had become a strong promoter of financial liberalisation in recent years, reintroduced capital controls.¹⁷ But although defensive intervention may help ease pressures temporarily for individual countries, it is no solution for the world financial system for which it means a clear backlash jeopardising the achievements of liberalisation and integration reached so far.

A second policy option is *offensive intervention* where countries themselves become global competitors either searching to provide an attractive environment for global companies within their own territorial boundaries or lobbying other countries on behalf of the worldwide activities of their domestic corporations. In international finance, examples can be found for both strategies. On the one hand, financial centres such as London, Frankfurt and Paris try hard to create favourable conditions to attract foreign banks, and on the other hand, countries' politicians and financial authorities sometimes deliberately seek to influence international negotiations and regulations in a direction that would benefit the international activities of their domestic financial institutions at the expense of others.¹⁸ The drawback of this approach is that offensive interventions easily end up in a kind of ruinous competition between states leaving all of them worse off.

A third option for coping with the challenges of globalisation is known as *global public policy*. This concept was developed as a direct reaction to the observation that, generally, nowadays the activities of multinational firms no longer take place within national boundaries but extend to 'a much broader and more fluid geographic space',¹⁹ resulting in a mismatch between political and economic geography which is weakening the internal sovereignty of states. Financial services are only one example of this trend. Global public policy aims at realigning the political with the economic geography. Under this concept

states' sovereignty is no longer defined by territoriality but on a functional or sectoral basis. This requires a qualitatively new form of cooperation among countries corresponding to the structure of global corporate networks.

Global public policy does not aim at establishing a global government. There is no attempt to create a new Bretton Woods system or any other form of institution or rule governing financial markets from above, which in all its inflexibility would be considered unsustainable. Rather the concept adheres to the idea of global "governance" addressing the operational and not the formal dimension of state sovereignty. Global public policy is structured around legally nonbinding international instruments. An example is the capital-adequacy rules of the Basle Accord for internationally operating banks, a framework which was developed and agreed globally, but implemented and monitored on a national level. Two features of this policy are crucial for its success: compliance and enforcement.

The approach relies strongly on the divisibility of state sovereignty and the principle of subsidiarity. Policy is formulated taking a global perspective, but implementation is delegated to lower regional, national or even local levels as far as possible making use of existing bureaucratic structures and institutions. Besides, governance does not necessarily imply government. Stressing function, it may refer to any actor or institution that is in the best position to support the operationalisation of the concept. This includes local actors which may play an important role in collecting data and enforcing and monitoring globally agreed rules and standards. Policy-making may be 'outsourced' to nonstate actors, 'to businesses and their associations, labor groups, nongovernmental and nonprofit organizations, consumer groups, foundations and other interested parties, or a combination thereof'²⁰ benefiting from their often better information and understanding of the issues.

For example, for the international financial system one could think of both national and international private-sector institutions and organisations participating in the various stages of policy formulation, implementation and monitoring, such as bankers

¹⁷ For the various reactions to the crisis compare Beate Reszat: Asian Financial Markets' Prospects – Attempt at a Synthesis, in: Lukas Menkhoff, Beate Reszat, op.cit., pp. 353-384.

¹⁸ For example, this was the case with Japan in the negotiations which led to the Basle Accord of harmonised capital standards of internationally operating banks. See for the details Beate Reszat, op.cit., pp. 159-161.

¹⁹ Wolfgang Reinicke, op.cit., p. 64.

²⁰ Ibid., p. 89.

associations, the Institute of International Finance or the Group of Thirty and, as an extreme form of horizontal subsidiarity, individual financial institutions in self-regulation. One proposal worth mentioning in this context is for each bank to have its own 'moral intelligence officer' whose task would be to hinder excessive speculation from inside while, at the same time, a network of international organisations and institutions like the IMF, the World Bank, big banks and NGOs would monitor bank behaviour, exerting pressure by threatening to publicise any offenses.²¹

What would be the aims of such a global public policy approach for international financial markets? There are two aspects. The first is an increase of information and market transparency to detect vulnerabilities affecting the international financial system at an early stage. The second is to change bank behaviour by establishing a kind of best practice guidelines, rules of conduct or standards to develop a market culture characterised by financial institutions showing less greed and more responsibility for the whole.

How could this be achieved? Traditionally, central banks and national supervisors have a wide range of formal and informal ways of influencing markets. If moral suasion does not work, direct regulation including a closer monitoring of banks' foreign exchange transactions as well as various forms of restraints acting as 'circuit breakers' under internationally agreed, well-defined circumstances to guarantee a level playing-field might become an alternative. There are pessimists who doubt that banks' daily business could be regulated in this way efficiently. However, recently issued sound practices for banks' interactions with highly leveraged institutions by the Basle Committee on Banking Supervision are one example which demonstrates supervisors' scope and optimism in this respect.

Conclusions

In February this year, the G7 initiated a new Financial Stability Forum. It will be comprised of representatives of national authorities, international financial institutions such as BIS, IMF and World Bank, as well as international supervisory bodies and expert groupings from central banks who will meet twice a year. The forum was criticised by some observers as just another paper tiger demonstrating the politicians' helplessness in the face of increasing market turmoil. But, after some modifications, it might well develop to an important starting-point for the establishment of a

network for a global public policy promoting greater stability.

One of the main drawbacks of the approach so far is its failure to integrate the banks themselves into the process of formulation of standards and policy implementation. The concept still smacks too much of top-down governing with all its well-known inefficiencies. Another weakness is an implicit focus on financial systems and institutions in emerging markets. As demonstrated above, at least some of the problems arising in a crisis lie at the heart of western financial institutions. A third danger is the concentration on macroeconomic developments and macroprudential aspects neglecting the role of the many micro-decisions made hourly and daily in the banks' trading rooms which are driving the market.

The Financial Stability Forum is intended to closely monitor economic and political fundamentals. But this alone will not suffice to guarantee the authorities' timely reactions since fundamentals are not the only determinants of market expectations. Experience has shown that in particular in times of crisis herd behaviour and a reliance on 'instincts' prevails. In addition, with increasing turbulence expectation horizons become shorter and market participants' attention shifts more and more to technical indicators such as graphs and other statistical tools from chart analysis²² since changes in economic fundamentals are simply too slow to respond to the dealers' frantic search for new information. In this way, the market in a sense artificially 'constructs' its own material on which to base expectations which then often become self-fulfilling. Therefore, closely monitoring and judging market movements from inside – a task for which banks in self-regulation might be perhaps best suited – seems indispensable to get early warnings of where crisis looms.

The process of international cooperation to coordinate policy reaction to growing international financial instability has just begun. The efforts made so far will certainly not avoid the outbreak of the next crisis. But a decided reaction signalling the authorities' intent to redefine responsibilities in order to come to a new, more stable market culture may be a first step to contain its spread and limit contagion.

²¹ Compare the interview with Wolfgang Reinicke, in: Politik im globalen Netz, in: Die Zeit, 4 February 1999.

²² For recent research on the role of chartists and fundamentalists in the market see Helen Allen and Mark Taylor: The Use of Technical Analysis in the Foreign Exchange Market, in: Journal of International Money and Finance, Vol. 11, 1992, pp. 304-14.