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FINANCIAL STABILITY, MONETARY POLICY AND INTEGRATION: POLICY CHOICES FOR TRANSITION ECONOMIES[1]

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Abstract

This paper makes an attempt to distinguish between financial structures and monetary policies that have the potential to amplify real disturbances, and thereby to lead to crises *par excellence*, and those where fluctuations have risk sharing features, and do not aggravate real shocks. After outlining the features of financial architectures that are most probably responsible for the distinction, I evaluate transition economies, by judging their vulnerability from this perspective, and by offering future policies suggestions for acquiring a financial structure of the second type. My conclusions advocate bold liberalisation with a view towards full integration into world capital markets, and a not too activist monetary policy style.

1 Introduction

Financial stability and liberalisation (integration) have become pet subjects in the last decade. The concurrent reappearance of global financial markets and of a number of financial crisis episodes with a clear international dimension prompted both policy makers and academics to consider and reconsider the subject several times. For those Transition Economies in Eastern Europe (hereinafter referred to as TEs) whose clear political goal is to join the European Union the issue is obviously topical and recent global experience may contain manifold lessons for them to learn. Many of these countries belong to that middle income group frequently called emerging markets, where the 1990s saw a number of regional, globalising crises, erupting sometimes quite unexpectedly, and causing great harm. On the other hand the envisaged accession to the European Union involves problems specific to this very unification process, which might have been instrumental in the ERM crises of 1992-93.

In this essay I start from the observation that not all financial crises seem to be equally destructive. I hypothesise that the main responsibility of a financial architecture is to avoid destructive crises, since even large turbulences can be regarded as inevitable phenomena whose apparent dampening may actually be socially damaging. Section 2 elaborates on this idea. In the following two sections I will look at the problem with a view to identifying harmful financial crises. Section 3 focuses on the financial structure, and Section 4 tries to sort out the role of monetary policy. Section 5 analyses TEs' experience with financial crises, in addition to making guesses about what direction they are heading towards, whereas Section 6 considers monetary policy choices. Finally, Section 7 comments on desirable policy actions.

2 Distinguishing between crises

It is usually believed that financial crises are harmful *per se*, because they cause great pain to societies. Also, financial crises and vulnerability to crises are deplored   because they prevent monetary policy from efficiently managing inflation, either because a crisis makes it impossible,

or because vulnerability to crises softens the determination of policy makers. In addition to these general issues, if crises occur in the near future, TEs may suffer, both because of a delay in accession as such, and after accession, because of the prolongation of the period before monetary unification. Moreover, it is thought that financial liberalisation and integration in themselves increase the likelihood of crises. As TEs do not have very well-developed financial infrastructures this makes them especially vulnerable to crises since the accession process necessitates total capital account liberalisation, and also because accession exposes their domestic financial sectors to outside competition. The conclusion is a dilemma: their financial sectors must be improved and stabilised before accession, though liberalisation is a dangerous process, where caution is absolutely necessary.

One may say that the only perfectly safe financial system is no financial system at all. Our understanding of financial intermediation suggests that there does not exist any without risks, be it based on banks or securities markets. Even complete securities markets would not necessarily put an end to fluctuations, and although intermediaries may improve the allocation of risks and resources if "open" markets are incomplete, they could not obtain a first best allocation.

Can we imagine a world where there are no financial troubles, but there still exist recessions and other types of real disturbances? Indeed, one of the main functions of the financial sector is to provide insurance against risks. However if risks are real and cannot be done away with by fiat, then is it not reasonable to assume that somebody must suffer sometimes, and that financial sector problems may indeed be part of the scheme of distributing risks (near) optimally? In this view crises help to give a state-dependent character to allocations, which is indispensable for efficient risk sharing when nondiversifiable risks exist.[2] This idea cannot be construed to imply that all banking, debt, asset market or exchange rate crises are optimal, i.e. contingent outcomes constituting part of a first best social distribution. This only means that they may have a useful function, and that the crises we dislike must be those that aggravate the natural risks of human (economic) life, or those that worsen rather than improve risk sharing in society. The real problem is not that financial crises occur, but that they may hit with an extraordinary force those who are most vulnerable. Apparently such crises do exist. As many recent crisis

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[2] In this vein Allen-Gale [1998a] argue that bank runs may be in some circumstances vehicles for achieving first-best allocations. Default risks have been known to improve on financial contracts (see e.g. Obstfeld-Rogoff [1996] Chapter 6). Also devaluations and inflation uncertainty can give a state-dependent character to nominal contracts, making markets "more complete".

episodes seemed to possess this unpleasant feature to a large degree, they seemed to provide a good pretext for denouncing liberalisation. However, we may find recent examples where the financial crisis did not seem to involve much "real" trouble. Then the question is not how to reduce vulnerability to crises in general, but rather how to create a financial architecture where possible financial disturbances belong to a risk-sharing arrangement, and may help share real exogenous risks.

Can we give an approximate definition of a "bad" financial crisis? 1. Real shocks are amplified in a "bad" crisis. 2. A "bad" crisis may be caused by shocks having nothing to do with fundamentals. 3. In a "bad" crisis losses are not shared, the poor suffer relatively more than the rich. It must be clear that the whole financial architecture, including markets, intermediaries, monetary policies, is responsible for the quality of financial crises, and that interaction between the components is crucial.

To illustrate the possibility of distinguishing between "acceptable" and bad crises I am going to consider some financial crises from the 1990s. What was the character of the 1992-1993 ERM crisis? For several countries (notably Italy and the United Kingdom) the general opinion was that the crisis did not bring any harm, rather the reverse. Apparently the crisis had neither real nor inflationary adverse effects. In fact the devaluations may have contributed in some cases to the recovery. In other words one can interpret the adjustable and vulnerable ERM as a sort of optimal arrangement where real disturbances (the German unification in the specific case) might have concluded in a financial crisis, which was, however, part of a state-dependent implicit arrangement.[3]

In contrast, what happened in Mexico may be construed as a harmful crisis. Mexicans suffered acutely for years after the crisis, while US investors were proudly reported by their government not to have lost any money. This was probably one of the most invidious developments of all famous crises in the 1990s. It is telling that after the Asian crises many banks hastened to publish losses which just served them right. Yet, the Asian crises themselves could not be viewed as optimal arrangements. As is well known, several East Asian economies went into severe and prolonged recessions, with unjust distributional consequences. It would be very difficult to assign these to existing real shocks that may have preceded the crises. Also, the financial sectors and monetary policies of

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[3] A less favourable interpretation is, of course, that there were countries , France, notably, where the crisis had no real reasons, and France thus suffered without deserving it. However, was it such a big problem for the French economy? There is little evidence that it was. The biggest cries must have come from politicians who suffered a loss of prestige, and possibly from financial market participants some of whom must have incurred substantial pecuniary losses.

both Mexico and East Asian countries exhibited some of those mistakes I am going to analyse in the following sections.

3 Vulnerability and the financial architecture

The literature gives a number of clues on how to identify those features of financial systems which could be blamed for the amplification of real disturbances. It appears to me that the presence of moral hazard, the large fluctuations in asset prices, the existence of financial market linkages and the lack of hedging possibilities, are the most usual suspects.

Moral hazard is generally regarded as one of the main reasons why a financial accelerator exists. Moral hazard has natural (exogenous) causes, but policies and institutions can aggravate the situation. (See Eichengreen-Hausman [1999].) Explicit and implicit government guarantees, as well as exchange rate pegging, have been identified as harmful mechanisms resulting in more moral hazard. Large *asset price volatility* and bubbles have characterised many recently liberalised financial markets and banking systems. However, poor quality of supervision, weak regulatory frameworks and inexperience could be usually noticed as lying at the root of these problems. *Financial market linkages* have been found to be powerful mechanisms in transmitting disturbances internationally.[4] On the other hand, the work of Allen and Gale [1998b] suggests that restricted liberalisation may have played a significant role here, and full international integration can be conducive to less exposure to international spillovers. *The lack of hedging opportunities* ([Eichengreen-Hausman [1999]) implies that international investors find their investments in emerging markets too risky, and develop such strategies to alleviate this problem that increase the vulnerabilities of the countries involved. These strategies involve, for instance, lending in foreign currency and at short term. Financial market liberalisation and allowing the entry of foreign firms into domestic financial markets can help to solve these problems as well, while monetary unification can be an even more stable remedy.

The above elements played important roles in the Latin American and Asian crises in the 1990s. Moral hazard via implicit guarantees was a well-documented feature of many Asian economies, and regulation was

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[4] See Darvas-Szapáry [2000] about the role of the regional aspect after the Russian crisis of 1998.

far less than perfect, resulting in asset price bubbles in Thailand, for instance. Several Latin American countries, suffering from the Tequila effect, may have had less than perfect currency hedging possibilities. Also, domestic financial markets were usually less than fully integrated, and had rather huge government and domestic participation.

From the above it seems that incomplete liberalisation and restricting foreign entry into domestic financial markets, accompanied by weak supervision, and not liberalisation and integration *per se*, are the things that cause harmful financial disturbances. One may object that full liberalisation will in fact increase the potential for foreigners to engage in destabilising speculation in the foreign exchange market. My argument is that there is no reason to believe that foreigners would probably use the access to lending and borrowing in the "domestic" currency for hedging purposes, whereas otherwise they would have to behave in ways (e.g. short-term foreign currency lending) which are probably more dangerous. Appetite for speculative profits can grow if monetary policies are inappropriate (see next section), but this can be avoided. On the other hand, having foreign lenders expose themselves to genuine exchange rate risk (i.e. risk that comes form real sources) provides an important risk sharing possibility. Foreigners willing to lend in forints will share the losses when things turn sour for Hungary, and the forint depreciates.

Another possible objection is that too much internationalisation may keep the financial sectors of TEs underdeveloped. What are the main arguments for the judgement that the financial sectors in TEs are relatively inefficient? There seem to exist a number of comparable indicators pointing to this inefficiency. They include measures of financial depth, the share of GDP created by the banking sector, interest rate spreads, market capitalisation, etc. However, one should refrain from a hasty interpretation of these indicators.

First, financial depth and the overall size and liquidity of asset markets may be closely related. As quite a huge part of money demand comes from financial transactions demand, small financial markets may in themselves reduce money demand. Second, there may be important offshore markets that take up a large part of financial business for several TE currencies. Third, these countries are usually open, but their foreign trade is not invoiced in their own currency, thereby decreasing money demand. Fourth, some countries have an increasing share of multinationals, or other group of firms that conduct quite a lot of business internally, also implying that their activity requires little "domestic" money. Fifth, the leverage of the multinational sector can appear to be too

low, despite the fact that parent enterprises can be highly levered. Thus there must be quite a deal of financial intermediation occurring in foreign markets, which results in investment in the country in question. Sixth, foreign banks make direct lending to domestic enterprises to a certain degree.

To sum up, there are several factors suggesting that the usual indicators do not indicate correctly how easy the access of enterprises to the services of financial intermediaries is, as these financial services have already been integrated into world markets. Domestic interest rate spreads may reflect a worse mixture of borrowers than what actually gets credit in the economy. Of course, the indicators also show the consequences of "primeval sins" (domestic money is not used in transactions involving foreigners), and/or those of size effects. Having said that it remains true that financial development is not very high in TEs, especially with regard to the household sector. Here there must remain scope for financial sector problems, for instance in the case of a real estate price bubble. However, one can again trust learning capabilities. Even without any specific regulatory effort, too much risk taking may be avoided by the financial institutions themselves, having learnt from the mistakes of the past decade. One can have a sober view of the rationality of the market, but one can be confident that recurrent events may make an impact even without the assistance of government intervention.

4 Monetary (exchange rate) policy and financial stability

There has been a style of monetary policies pursued by central banks in emerging economies with a view towards disinflation that might have had unwelcome effects on financial stability. This strategy involved a heavily managed (almost or practically pegged) exchange rate, coupled with sterilisation, which tried to give a not insignificant positive excess yield (premium) on the home currency. Formally

$$\pi = i - (i^* + ds)$$

is the premium on the home currency when i is the home interest rate, i^* the foreign rate and ds the rate of future devaluation of the home currency.

This policy implies that while times are "tranquil" the excess yield has a significantly positive mean, and a relatively small variance. However, there is also some probability that due to a surprise depreciation the

mean of the excess yield in the whole regime becomes closer to zero, and its distribution has a larger variance and also possesses features of nonnormality, such as excess kurtosis and non-zero skewness. Table 1 illustrates this traditional *peg cum sterilisation* regime for four countries that practiced it, and suffered an exchange rate crisis.

Table 1/1
Measures of monetary policies in the peg cum sterilisation regime in tranquil times

	(1) ME 91:4-93:11	(2) TH 91:4-97:3	(3) KO 91:4-97:7	(4) IN 91:4-97:4
(1) pr	0.1104	0.04	0.052	0.0336
(2) var	0.0016	0.0018	0.006	0.0008
(3)ske	-.563	0.3038	-.7545	-.1443
(4)kurt	0.5311	-.0851	1.5191	2.1837
(5)rrate	0.05	0.0395	0.0822	0.0377
(6)cor	0.73	0.64	0.3	0.24
(7)α	0.99	0.99	0.98	0.99

Table 1/2
Measures of monetary policies in the peg cum sterilisation regime including the first months of the crisis

	(1) ME 91:4-93:11	(2) TH 91:4-97:6	(3) KO 91:4-97:10	(4) IN 91:4-97:7
(1) pr	0.064	-.0036	-.0301	-.0085
(2) var	0.0172	0.0537	0.2322	0.0534
(3)ske	-3.063	-5.375	-5.97	-5.961
(4)kurt	11.175	31.183	36.817	38.289
(5)rrate	0.054	0.0381	0.08	0.0377
(6)cor	0.28	-0.03	-0.32	-0.23
(7)α	0.99	0.97	0.98	0.99

(ME: Mexico, KO: Korea, TH: Thailand, IN: Indonesia. pr: the average premium on the USD, var: the empirical variance of the premium, ske: the empirical skewness of the premium, kurt: the empirical kurtosis of the premium, rrate: the 3-month real interest rate on the domestic currency, α: the weight on the domestic currency versus the USD (see below))

The (adjustable) *peg cum sterilisation* policy based disinflation mainly on the exchange rate anchor, but, as it were, with no full confidence. The lack of total confidence explained sterilisation and the resulting positive average yield differential, which was thought to be helpful in defending the peg. Also this strategy was believed to be disinflationary, via giving respectably high real interest rates. (See Row (5) in Table 1.) In this framework there was a very likely gain for everyone willing to invest in the country's currency, or alternatively to borrow in foreign currency. It is common knowledge that one type of gambler prefers exactly this sort of gamble, tending to neglect small probability events. This gambler is satisfied with even small gains, and may forget that there might occur a large loss when the small probability (unfavourable) outcome is realised. It is widely believed that this policy aggravated the East Asian crises when they came. The mechanism is as follows: there is an implicit, but unsure, guarantee by the government that it will not devalue, while it keeps the nominal interest rate above the foreign rates.[5] The interest rate differential is high enough for many firms or banks to prefer borrowing in foreign currency, which results in a currency mismatch making the situation very delicate when adverse shocks occur.

Table 2
Measures of monetary policies in the new floating regimes

	(1) ME 97:1- 00:9	(2) TH 98:3- 00:9	(3) KO 99:1- 00:9	(4) IN 98:5- 00:8
(1) pr	0.10	-.04	0.0137	0.3368
(2) var	0.0410	0.0556	0.0172	0.6707
(3)ske	-.379	0.8011	-.4024	1.1316
(4)kurt	1.1815	0.1909	1.1782	0.5819
(5)rrate	0.076	0.0394	0.0269	0.1939
(6)cor	-0.53	-0.41	0.08	0.06
(7)α	0.94	0.86	0.98	0.8

(The beginning months in this table were chosen so as to exclude the most turbulent periods.)

The apparent failures of these policies have led to two directions. One direction has led to stronger rigidity via a currency board arrangement, and the other one, recently very popular, involves floating exchange rates. Table 2 shows the corresponding statistics for the four countries in their post-crisis "flexible" regimes. One can see that the practice of flexibility

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[5] See again Burnside-Eichengreen-Rebelo [1999].

is more diverse than that of pegging. Premia are large and positive in some countries, while negative in others. The mean is probably not so meaningful a statistic in this regime as in all cases variances have increased rather substantially. Real interest rates are again positive but with large differences across countries. Another observation about the shift of regimes is that the correlation between real returns changed from positive into negative or became small as a result of floating, due probably to the weakened exchange rate pass-through.

It may be too early to assess the performance of the new regimes, or even to find out what characterises them precisely. From the point of view of engendering financial vulnerability one may have suspicions. The countries with large average excess yields (see Table 2) may increase their vulnerability as this may attract speculation in a floating regime, too, by (nearly risk neutral) foreigners, or can result in desperado behaviour by residents. On the other hand Calvo-Reinhart [2000] shows that many "nominal" floaters practise exchange rate management, though, in some cases, not so much via direct exchange market intervention, but rather with the help of nominal interest rates. This in itself may cause disturbances in the financial system.

I would like to add another possible reason why the new regimes can in the end prove to be also apt to suffer from serious financial turbulences. So far I have used the term "real interest rate" in the usual sense, as the relative price of domestic consumption today in terms of tomorrow's consumption, when the calculation is based on the domestic currency interest rate. Is it not an atavism of closed economy macroeconomics to think of the domestic interest rate as "the" interest rate? Adding the Keynesian presumption of predetermined prices this leads to the identification of nominal and real interest rates that residents must presumably face when making saving-investment decisions. However, it could be more plausible to think of the real return as a distribution that is available for those investing in domestic bonds, or in foreign bonds, or in any other securities. In fact, the sure real interest rate simply does not exist in any economy.

Although there may be several assets in the menu, let us confine our attention to two default risk free bonds, one denominated in the home and the other in a foreign currency. With substantial liberalisation of capital flows, a domestic investor may form a portfolio that is more or less close to a real asset with a yield almost not contingent on the state. More

formally, let us define an approximate real bond as the one solving the following problem.

min var($\alpha r + (1-\alpha)r*$

where

$$r = i - dp$$

and

$$r^* = i^* + ds - dp$$

are the respective real returns on home and foreign currency bonds. (Here *dp* is inflation.)

The optimal solution may imply that one of the weights (α or $1-\alpha$) is negative. The optimal α can be expressed as

$$\alpha = \frac{\text{var}_{r^*} - \text{cov}_{r,r^*}}{\text{var}_r + \text{var}_{r^*} - 2\text{cov}_{r,r^*}}$$

Then we can take the expected yield on this portfolio as the approximate real rate of interest, while the α weight also provides us with information about monetary policy. One, perhaps surprising, lesson from Table 1 is that the domestic currency real interest rate is practically the same as the average real return on the minimum variance portfolio (see Row (7) with the large αs). The reason for this is obviously the large variance of foreign currency real interest rates. On the other hand one can observe a decrease in α in all cases, and in the cases of Thailand and Indonesia a rather significant one. This might suggest that the increased volatility of domestic currency real interst rates may give an impetus to risk averse agents to rely more on foreign currency denominated instruments than in the previous regime. If the *peg cum sterilisation* regime foundered on risk lovers, who neglected low probability events, the new regime can prompt both conservative and speculative agents to turn away from the domestic currency, undermining thereby its stability.[6]

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[6] One must notice that the high kurtosis in the distributions of excess returns observable in Table1/2 might have led to the distrust in the domestic currency by conservative agents, too, since variance is not the approporiate measure for risk in the case of non-normal distributions..

5 Past and future crises in TEs[7]

There are a number of TEs that have suffered from some kind of financial crisis in the last decade. In Russia, virtually all types of crises appeared simultaneously in 1998. There was first a stock market crisis with significant real repercussions, then a sharp devaluation with foreign (including private) debt moratorium, and with bank runs resulting in a collapse of the payments system. After years of currency instability and banking sector problems, in 1997 Bulgaria saw a currency attack happen, resulting in a full-blown banking crisis with runs. Default was avoided, and there was no stock market crisis, there being no stock market to speak of. In Romania a permanent state of banking and currency problems has prevailed. In 1997-98, the foreign exchange situation exhibited the features of a crisis with large depreciation, though no bank runs and no collapse of financial intermediation ensued. The Slovak Republic was able to defend its fixed exchange rate system despite an attack during the Czech crisis of 1997. However, the Russian crisis of 1998 triggered the collapse of the fixed exchange rate system, leading to a large depreciation of the Slovak koruna.

In all of these cases, it appears that there were fundamental problems also ending in financial crises, in the, sometimes, rather simple financial systems. The root of the problems was patently fiscal, though for the Slovak Republic, this statement is not easy to prove by reference to traditional fiscal accounts. Despite the fact that the financial systems were obviously not robust or efficient in these countries, the financial crises were definitely adjunct to the very real troubles that plagued these economies. There seems to be no evidence that the financial sphere made things definitely worse. On the other hand it is possible that Bulgaria and the Slovak Republic were stimulated by their respective financial crises, and the reform processes gained momentum in their wake. In fact, it is possibly true for the other two countries as well.

The three Baltic countries (Lithuania, Latvia and Estonia) have had quite different experience. They all have rigid exchange rate regimes (currency boards in Lithuania and in Estonia, and a strict peg in Latvia), they have liberalised their financial sectors rather boldly, but they have been more exposed to Russian trade than most other TEs. The Russian crisis had quite a severe impact on Latvia, due to the economy's high exposure to

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[7] This section is, to a large extent, based on Árvai-Vincze [2001].

Russian markets, but the exchange rate regime did not have to be abandoned. Even though we cannot speak of a full-blown banking crisis, several banks experienced bank runs and liquidity crises following the Russian crisis. There was a modest rise in interest rates, though capital flight was not substantial as foreign participation in Latvia's capital markets is insignificant. Stock prices had been declining for several months already before the crisis; thus, there was no significant immediate effect on the stock market. Although Lithuania was also quite vulnerable to contagion from Russia, the currency board arrangement survived the storm and the consequences of the Russian crisis were more substantial in the real economy than in the financial markets. Financial markets basically reacted the same way as in Latvia. Estonia was a similar case to the other two Baltic economies, though with less damaging consequences to the real economy, due to its lower exposure to Russia. Nevertheless the stock market was hard hit by foreign investors' loss of confidence. As an automatic response to the liquidity shortage in a currency board system, there was an immediate rise in interest rates, but capital flight was not substantial.

The three Baltic states represent an interesting experiment inasmuch as liberalisation was coupled with very rigid exchange rate policies. These countries managed to get over the Russian crisis and its aftermath in a relatively intact state, proving that this mix of policies can be efficient in avoiding bigger troubles. The Russian crisis was definitely "real" for these economies, and almost necessarily their financial sectors were not as robust as possible. Still there were relatively few disturbances, like those in Latvia, that might have been an indication of a "bad" crisis. Indeed, one may say that these countries were definitely vulnerable to economic crises for real reasons. In this light one can evaluate the whole story of the Baltic states as fundamentally a success story. An alternative interpretation would be to attribute the troubles after the Russian crisis as a consequence of the inflexible exchange rate arrangement. Although this interpretation is not nonsensical, the burden of proof must rest with its advocates.

In May 1997, the Czech Republic was the target of speculative attacks which the monetary authorities were not able to withstand and the fixed exchange rate system had to be given up. The repercussions of the currency crisis in the capital market were less severe than expected. Though the currency crisis did not lead to a liquidity crisis in the banking system, the serious problems of the Czech banking sector, which have been accumulating for years, became more visible. I claim that the Czech crisis was not a bad crisis either, as it inflicted little pain on the economy,

at least no additional pain with respect to what should have followed in any case because of the real sources of the crisis. This was despite the fact that at the time the Czech economy did not exhibit all the good features I recommended in Section 2, and that previous exchange rate policies had belonged to the adjustable peg cum sterilisation category.

My view is that the Czech policy regime exhibited the features of an implicit risk sharing arrangement. It was based on a risky strategy of fast disinflation and quick resumption of growth in an ownership framework where the government's influence was strong via its possession of the banking system. As things turned out unfavourably, the implied exchange rate regime was able to implement cost sharing via the devaluation that put some of the burden on the shoulders of non-residents investing in koruna denominated assets. The crisis again worked like a catalyst, leading to a policy that after some years seems to be producing positive results. Today the Czech banking sector is in a much better shape and, to a large extent, in foreign ownership. Though the crisis caused the abandonment of the exchange rate based disinflation strategy, the current monetary policy is reasonable in that it avoids unnecessarily giving too good investment opportunities, and provides a fundamentally stable nominal exchange rate.

Poland's monetary authorities had widened the fluctuation band in several steps before finally letting the zloty float in April 2000. This move may have been influenced by the consideration of the desire for an "independent" monetary policy, and also taken with a view towards pre-empting potential speculative attacks. The Russian crisis had some adverse impacts on exchange rates and asset prices, but Poland may have had some real exposure to Russia, and contagion may also have been a factor at work. Still, there is little evidence that the post-Russian-crisis disturbances were really serious. Poland has put great weight on disinflation, surrendering monetary policy to that goal. (However, in order to cushion the impacts of the Russian crisis, some easing was forthcoming at the end of 1998.) Poland is a candidate where the adverse effects of a disinflationary strategy based on the interest rate channel might have been instrumental. The mini crisis at the beginning of 2000 may have been caused by the anti-inflationary zeal resulting in very high zloty real interest rates and in high premia.

In Hungary, banking problems had been solved via consolidation before 1995, though its cost may have contributed to the recurrent small attacks on the currency through 1994-95. The currency problem was managed via a larger devaluation and the implementation of a stabilisation

program. In 1998, after the Russian crisis, stock prices dropped sharply, but without important real effects. The exchange rate came under some pressure, but was defended almost costlessly.

Slovenia is a case of avoiding all sorts of crises at the cost of maintaining relatively strong capital controls, and pursuing extremely cautious macroeconomic policies. It has suffered from no crisis, but it has also seen relatively little liberalisation. This mixture of policies was admitted by good initial conditions, but Slovenia is apparently situated on a dangerous middle ground now, which may be a portent of future troubles, unless a bolder reform of the financial sector materialises.

6 Monetary and exchange rate policies in TEs

So far TEs have produced a wide variety of exchange rates and monetary policy regimes. Let us see a few statistics about Hungary, the Czech Republic, Poland, and Estonia in different time periods.

Table 3/1
Monetary policy measures in TEs

	(1) CZ 93:1-97:1	(2) CZ 93:1-97:4	(3) CZ 98:1-00:9	(4) PO 93:1-96:12	(5) PO 97:1-00:9
(1) pr	0.0658	0.048	0.0764	0.0624	0.1111
(2) var	0.0077	0.0125	0.018	0.0241	0.0366
(3) ske	0.2708	-.669	-.878	-.954	-.758
(4) kurt	0.0077	1.226	1.327	1.261	0.5319
(5) rrate	0.0197	0.0197	0.058	0.0326	0.0831
(6) cor	0.03	0.09	0.32	0.45	0.42
(7) α	0.79	0.88	0.97	0.98	1.04

Table 3/2
Monetary policy measures in TEs

	(1) ES 93:9-97:9	(2) ES 93:9-99:2	(3) HU 95:10-98:4	(4) HU 95:10-00:9	(5) HU 95:10-98:4	(6) HU 95:10-00:9
(1) pr	0.0052	0.0258	0.0914	0.075	-.019	-.039
(2) var	0.0003	0.0019	0.0045	0.0074	0.0113	0.0188
(3) ske	-1.33	1.249	-.431	-.785	-.749	-.7435
(4) kurt	8.133	1.306	-.700	1.76	0.513	0.2431
(5) rrate	-0.172	-0.11	0.0468	0.0495		
(6) cor	0.99	0.97	0.84	0.77	0.24	-0.02
(7) α	0.42	-0.53	1.32	1.26	0.77	0.79

(CZ:Czech Republic, PL: Poland, HU: Hungary, ES: Estonia (In Table 3 the premium, correlation and α rows refer to the Deutsche Mark, except in Columns (5) and (6) of Table 3/2 where they refer the US Dollar.)

The Czech Republic followed a *peg cum sterilisation* style policy before its own crisis of May 1997. Columns (1) and (2) in Table 3/1 illustrates this, though the changes between the columns are not so sharp as those between Tables 1/1 and 1/2, as the Czech crisis was a relatively mild affair compared to those of East Asia and Mexico. In 1997 Czech monetary policy switched to a floating regime, and Column (3) exhibits some of the more general features of floating regimes found in Table 2.

From 1993 on, Poland increased its exchange rate flexibility gradually, starting from a traditional crawling peg, then widening the bandwidth until abolishing it. Splitting the sample into two shows what it has meant. There was an increase across subsamples in both the premium and the real interest rate, and there was an increased variance in the premium accompanied with somewhat more "normal" higher order moments.

After its mini exchange rate crisis in 1995, Hungary moved from an adjustable peg regime to a crawling band with a +-2.25 bandwidth, sticking to it until April 2001. Since the band was most of the time defined for a basket of DM and USD I report statistics for both currencies. Colunm (3) and (5) in Table 3/2 show the statistics for the subsample before the Russian crisis, and Column (4) and (6) for the whole period. (Column (3) and (4) refer to DM statistics.) One can observe here again the features of *the peg cum sterilisation* regimes, but without a proper crisis. The αs reflect the existence of the basket, and also the fact that DM real interest rates had a much higher correlation with forint real rates, due probably to a close relationship between DM/forint exchange rates and Hungarian inflation. The large difference between the premia is attributable to DM/dollar exchange rate changes.

Estonia has been a devoted currency boarder, fixing its krona against the DM from quite early on during transition. Columns (1) and (2) in Table 3/2 show the small premia in tranquil times, and the somewhat increased premia if we include the turbulent periods of the Asian and Russian crises. Nonnormality appears even in normal times, but the obvious difference between this and the *peg cum sterilisation* strategy is the size of the premium. Note the large negative average real interest rates.

From the above tables it seems that all countries, except Estonia, had significantly positive real interest rates. One may pose the question

whether these were important for inflationary developments. Figure 2 would suggest that this was not so much the case. Estonia had the most spectacular disinflation of the five countries whose inflation rates are displayed, and it has recently been a forerunner in the inflation front, together with the Czech Republic.

Figure 1

Inflation in TEs 1995-2001
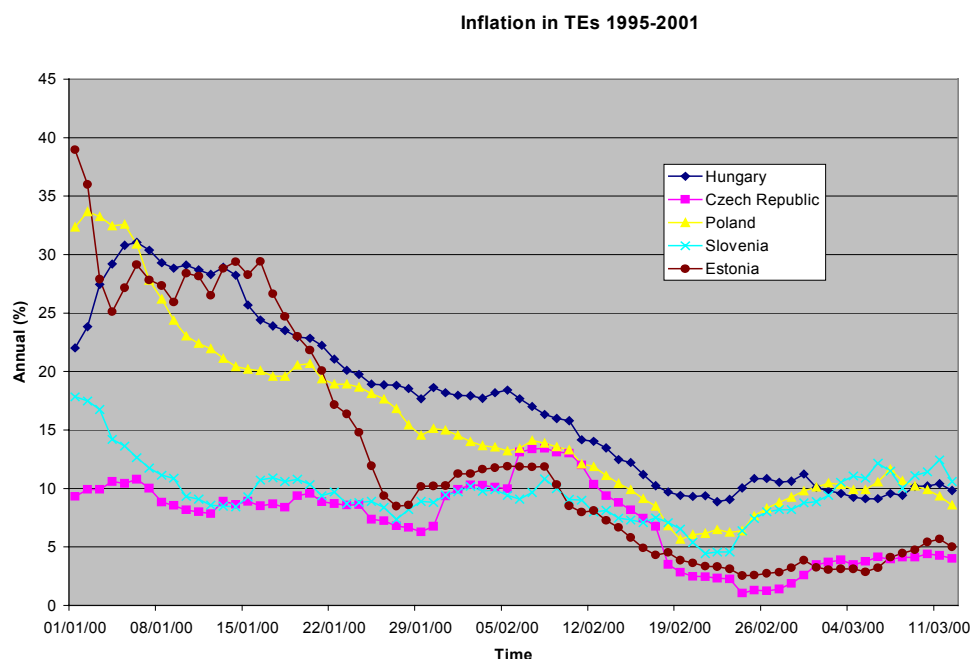
Indeed Table 4 can be invoked to give a different explanation for differential inflation developments in the region.

Table 4
Inflation and exchange rate changes

	Price level change (%)	DEM exchange rate change (%)
Czech Republic	45	-2
Slovenia	65	26
Estonia	82	0
Poland	103	33
Hungary	135	85

The only change in rankings happen between Estonia and Slovenia, where Slovenia has the highest per capita GDP, and Estonia, a former

Soviet republic, probably had the most distorted price system at the beginning of transition. The above data suggest the following interpretation. Real interest rates have probably played minor roles in inflation developments. The style of monetary policy, or the exchange rate regime was not really determining inflation either in the short or in the long term. Short-term movements in the rate of inflation were probably due to common causes (oil prices, agricultural shocks), whereas monetary policy mattered for lower frequency price changes, mostly via its relationship with the nominal exchange rate.

What about the relationship between these monetary policies and financial vulnerability? Above we noted the role of *peg cum sterilisation* policies in the Asiatic and Mexican crises. Again, we find large premia with small variances in the Czech Republic before 1997, which is also suspected to have played a role in the crisis. In fact Czech monetary policy has recently moved towards much smaller premia (see Figure 2). Polish premia became quite large in the second subperiod, while interest rate volatility has probably been largest in Poland (see Figure 2 again). In fact Poland has been struggling with balance of payments problems in recent years, and it is not impossible that beside fiscal policy its monetary policy might have contributed to this. Hungary's crawling band system seemed to work reasonably well from the point of view of financial stability, as it had more built-in flexibility than pegs. This policy, however, fared worse than most others in inflationary terms (see Figure 1). On the other hand Estonia's currency board, which performed quite well in terms of inflation, was no safe haven against the turbulence of international financial markets.

Figure 2

Three-month nominal interest rates
January 1993 - April 2001

Poland
Hungary
Czech Republic
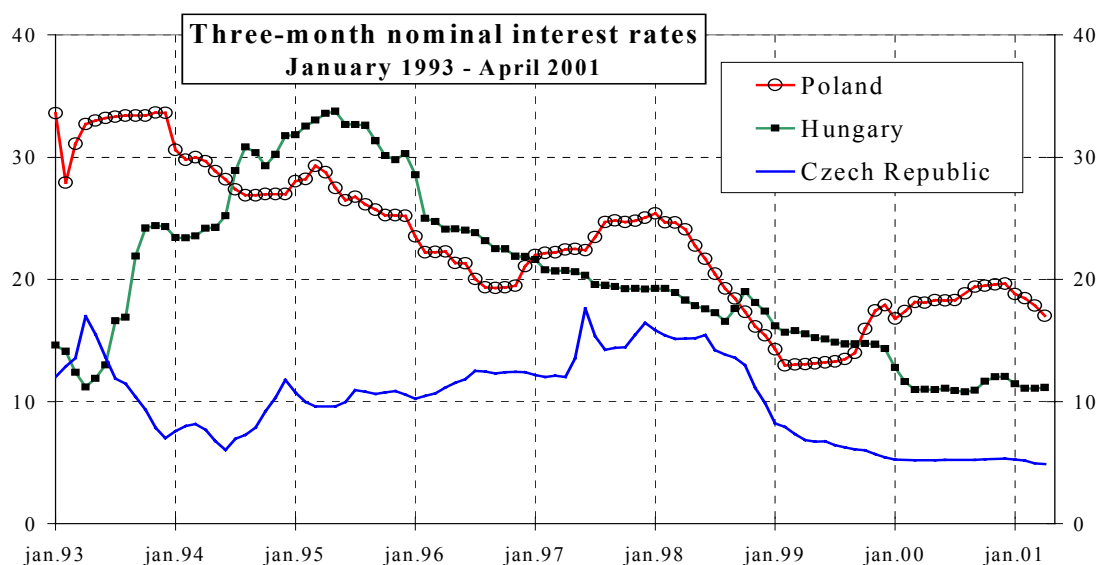
This broad menu of monetary policies might have important attraction to investors when there are regional shocks. Providing different exchange rate regimes is apparently tantamount to offering different assets where asset yields have the same regional factor, and these different asset yields react differently to the same source of uncertainty. In other words, countries have provided investors with significant diversification opportunities. This might have contributed to the popularity of the region. Now, is this a stable arrangement and, if not, what would be the consequences of changes thereof?

Hungary's recent switch to floating rates suggests, though not necessarily implies, some convergence between exchange rate policy styles. If there is a move towards uniformity, and it will almost necessarily happen if several countries aim at fulfilling the Maastricht criteria simultaneously, then this diversification possibility will pass and capital flows may become either smaller or possibly more volatile. It is not unlikely that uniform policies played important roles not only in the East Asian crises but also in the ERM crisis. Taking this into account, either some sequencing of Monetary Union entry or the changing of the Maastricht criteria might be of some help. As the latter would be very difficult to change, the first solution appears to be more viable. However, it would obviously also trigger political tensions. So there is a definite sense in which the two pre-euro years may become the most susceptible to capital flow volatility and attacks. This means that it would be useful to do everything possible to prepare for this.

The recent worldwide move towards flexible exchange rates, and a strong emphasis put on the interest rate channel of monetary policy has been motivated by several ideas. One goal certainly was to diminish financial vulnerability, and another involved a more successful management of inflation. This latter goal can be decomposed into two. First, countries wish to target low inflation on average, and secondly, they would like to stabilise inflation. Both ideas are explicit in the Maastricht criteria, and very strongly imbued in EU mentality. If we have reasons to doubt both the necessity of having very low inflation all the time and the desirability of little inflation variability, then *a fortiori* we have a case against the very active use of the interest rate or, which is the same thing, the interest rate channel, in TEs. In the following, I proceed to develop an argument to this effect.

There are good reasons to believe that the real exchange rate is going to appreciate in the accession countries. Whether this is strictly related to the so-called Balassa-Samuelson effect, or can be explained by other causes

is not important here. Indeed, there might be other factors behind the increase in the relative price of services with respect to industrial goods. One can invoke, for instance, improvements in the quality of services, which would have the same impact on relative prices as differential productivity growth, except that the former would act from the demand side of the economy. In addition, the former habits of pricing public services would also imply that their relative prices will increase at a relatively higher rate in TEs. The differences in pricing agricultural goods are well-known, and their impact on relative prices can also be predicted to result in real appreciation. This real appreciation on a CPI basis seems to be unavoidable provided that TEs fulfil the hopes of faster development and modernisation. Now the question is whether this will be carried out via a positive inflation differential or nominal exchange rate appreciation. Thus, in order to attain the EU average it is almost sure that, aside from temporary manipulation, one would have to resort to nominal appreciation.[8] No one doubts nowadays the advantages of having a low rate of inflation, lower than that prevailing in many TEs at the moment. However, it is fair to say that a few percentage points higher inflation than that achieved in Euroland is probably not so tragic. If appreciation will require high average excess yields, then, though potentially helpful against inflation, it may also increase vulnerability by attracting hot money. With very robust financial systems and with very good prudential regulation the problem may not be too serious. Nevertheless, it is questionablewhether all accession countries would pass this test on account of the weaknesses of their financial sectors. This is an example of the importance of interactions between monetary policies and financial structures in determining vulnerability.

One might also argue that striving for very little inflation variability can be counterproductive. It is clear that both long-run and short-run relative price changes have occurred and will occur in TEs. It is a fair assumption that these changes go on in markets (industries) having very different characteristics concerning price flexibility. Some of them work like auction markets, with very strong short-term demand and supply effects. Others, like public services, are usually repriced once a year, while on other markets certain indexing mechanisms may have developed, especially in those countries where exchange rate changes were predictable and stable. In any case, an active monetary policy implying frequent and possibly large nominal changes would definitely cause relative price variation and therefore allocational distortions. For instance, there are very good reasons to believe that food prices are much more

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[8] Nominal appreciation and the concomitant "weighing-in" problem are analysed in Szapáry [2001].

volatile in TEs than in developed economies. As the share of food prices is also higher, this imparts an incipient volatility to the CPI as well. Efforts to stabilise it may cause variations in relative prices that could be totally nonsensical from a general welfare point of view.

7 Summary and policy conclusions

In this essay I distinguished between "acceptable" and "bad" financial crises, seeking to identify the features of financial structures and monetary policies that are most likely responsible for the distinction. The analysis of financial crises in TEs has shown that although none of them have exhibited the properties that would make the avoidance of a bad crisis very likely, they haven't had any "bad" financial crises in the sense I use this term in this study. There are two possible explanations: either this has happened by chance, or their financial infrastructure has been so underdeveloped that it has not had the necessary strength to produce a veritable bad financial crisis. As the countries under review seem to be intent on developing their financial sectors, they should remain or become vulnerable to bad crises in the future. So what are the best ways to escape from this predicament?

A recurrent topic of Section 2 is that liberalisation and integration are the only safe strategies in the long run. In the case of TEs there is one reason why caution must not have an enormous weight in the immediate future. The reason is that EU accession will in any case require virtually full liberalisation, and there is some advantage to the idea of starting experimentation with a liberalised system before that date. One important caveat is that the quality of prudential regulation must be improved, as it appears to be a necessary part of any modern financial system. The biggest challenge is how to cope with asset price bubbles. In this respect, recent regulatory experience must be incorporated into the regulatory frameworks as fast as possible. It must be noted, however, that regulators can trust the learning capacity of the private sector.

This leads to another major point: privatisation of the financial sector must go ahead quickly, and if it is done fairly and without restrictions, then almost necessarily it will involve a very high foreign ownership share in all TEs. Indeed, in the last few years enormous progress has been made in this field even in those countries that used to lag behind with respect to bank privatisation. Foreign banks' participation is useful not just because they have experience in general and in particular with recent financial turmoils, but also because this can ameliorate the moral hazard

issue, which is potentially the most dangerous factor for financial vulnerability.

It appears to be a general lesson from the Asian crises that several of the countries that suffered most from the concatenation of financial sector and currency crises had had a domestic ownership oriented policy of liberalisation. Now some of the TEs have not committed that mistake that is one way leading to moral hazard via implicit guarantees. However, it can be an important problem for Slovenia, which appears to have chosen the cautious and protectionist approach so far, that it can run into serious difficulties at the time it would most need some respite. For every country cleaning up the inevitable mess that must have accompanied the early stages of transition must be an important prerequisite to successful entry into the Union.

The analysis of monetary (exchange rate) policies showed that the relationship between these policies and financial vulnerability is very complex. We have learnt of the dangers inherent in currency pegs, and may have misgivings about actively independent policies in floating regimes. I raised the question whether the goals of avoiding financial instability and attaining low and stable inflation are fully consistent.

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