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Impact of Globalization on Financial Crisis and its Propagation

Abstract

The financial crises are still unexpected and very harmful phenomenon. One of the reasons for the harmfulness of the crises is a fact that it can hit an innocent country. It is called contagion effect. The crises can be transmitted through different channels like trade or financial one. It is very interesting to find out an impact of globalisation on those channels and indirectly on the financial crisis shape. We try to show that for some pagination channel like trade channel globalisation should be seen as a factor strengthening the role of the channel, on the other hand for channel like financial one the globalisation impact may be distinct, because at least two processes acting in opposite directions may be distinguished.

Introduction

Financial crises are quite common in contemporary world. It can be observed that often the country, which does not contribute to causing the crisis, may be a victim of the crisis. Such unintended negative consequences are mostly due to contagion effect. The transmission of the crisis take place through different channels related to the integration in trade, capital flows and agents expectations. In our paper we would like to examine how the globalisation affects those channels and in that way whether in the global world the financial crisis is more or less like to happen. Additionally we analyse the impact of globalisation on the selected reasons for financial crisis.

1. Definition and reasons of financial crisis

In our paper we define the financial crisis rather using open state-of-the-art approach than purely monetarist one, in which the whole attention is focused on the bank run. Considering the broad definition financial crises can combine with different kind of crises such as the public finance crisis, as well as the sheet of balance, interest rate, and accelerated inflation one. The nature of crisis may be very different, sometimes they hit only a country, in which the crises have occurred, the other influence other economies. In that latter sense crisis are transmitted to other countries. Such phenomena are sometimes called contagion effect focusing on the negative aspects of transmitted shocks. We accept very broad definition of contagion understood as the situation whenever a shock to one country is transmitted to another country, even if it is not connected with significant change in cross-market interdependence. The contagion effect may lead to strong recessions, devaluation and strong exchange rate volatility.

To better understand the role of globalisation in crises we would like to start from the short presentation of reasons for crises and show how they are related to integration characterised for globalisation. There are many reasons for financial crisis. To them following may be classified:

- Inequalities in the balance of payments;
- Budget deficit;
- Expansionary policy;
- Micro-factors contributing to bubbles on both the shares and money markets due to the external financing of economic growth;
- Inappropriate pace of inflation towards the inflation in an anchor currency country;
- Expectations and speculative attacks;
- Contagion or cascade effect.

Additionally there are some tendencies typical for transition economies that make risk of crisis occurrence higher. It is well known that Harrod-Balassa-Samuelson effect "produces" real appreciation of domestic currencies in these economies. In consequence, one may observe shifting from long-term to short-term capital flows, and there is a serious threat of sharp depreciation, and crisis incidence (Lutowski 2003).

Some of the mentioned reasons are said to be internal, but it occurs that they can be seen as related and influenced by the globalisation process. For example domestic policy can't be considered no more as an independent in countries consisting or aspirating to the large international organisations, which

execute common policy, like specific level of budget deficit or public debt. On the other hand, globalisation means more and more close and deep integration at mentioned political and also economic level, the latter especially in trade, financial and competing sense, what for sure has observable impact on financial crises and their character.

An example of such resignation from independent economic policy and performing policy imposed by globalisation may be the situation of some European countries, like Poland, Hungary or Czech. Those countries are forced to adopt the fixed exchange rate regime at least transitory, because the countries wanting to join EURO zone has to take part in ERM II characterized by fixed exchange rate. On the other hand acceptance of a generally common solid policy should be considered as way of making domestic economy more resisting to internal reason for crisis emergency.

Analysing the reasons for financial crises is worth of saying that the most important factors are connected with the fixed exchange rate regime. That regime is very enthusiastic adopted by many countries for reason pointed by Blanchard (2003). It is very much true, that especially developing countries that are facing many macroeconomic problems, very often suffering from many fiscal problems, having been hit by inflation and lacking of monetary credibility are decided to introduce the currency board (kind of fixed exchange rate regime). Krugman and Obstfeld showed that some developing countries that had seriously suffered from inflation and afterwards managed to stabilise it, went through a short initial period of hard peg (fixed exchange rate period), aiming at reducing inflation expectations and then turned into floating exchange rate. It means that such a country is the possible target for speculative attacks (Krugman, Obstfeld 2003). A fixed exchange rate is very tempting for capital speculators and (in extreme cases) speculative capital attacks may generate financial crises.

Inequalities in the balance of payment as well as enormously large budget deficit are the interior factors that make the risk of the crisis occurrence higher. Problems of the budget deficit are very often solved through monetisation, which may be extremely dangerous in the context of the currency crisis. In the context it is interested to indicate that the monetisation may be to some extend evoked or prevented by globalisation. Moreover both surplus and deficit of the current account may result in serious “injuries” for the whole economy. If there is a big and stable current account deficit, then the investors expect the currency devaluation, and therefore, they get rid of the currency in order to prevent themselves from the possible losses. In consequence, the currency is devaluated. The speculators have an opportunity to buy the currency of foreign economy for a good price. In many cases the defence of the exchange rate is not

satisfying, and the currency is devaluated anyway. It is also worth mentioning while considering the factors influencing the current account deficit that the FDI are usually import-based substantially and they turn to be export stimulating after a while. At the same time capital inflow may make the domestic propensity to save decreased and initiate credit action, which results in increase of money supply, inflation, terms of trade worsening, and finally decrease of import, increase of export, which leads to deficit in the current account.

Surplus of the current account has also negative consequences. It means higher probability of the currency revaluation. The surplus causes foreign currency inflow as an effect of purchasing domestic currency transactions. Therefore, money supply increases, prices grow up as well, and inflation begins. Certainly, as we know, inflation may worsen the current account balance.

Expansionary monetary policy is another cause of the crisis. The policy may lead to the famous "bubble" creation, i.e. the situation when the prices of shares and the level of interest rate are attractively high, which is possible due to existence of external sources that finance economic growth. This case can be the Asian growth paradigm. External financing comes from capital flow liberalisation, concerning mainly short-term speculative capital inflows. It turned out that the vast majority of the countries had not been able to prepare for the capital inflows because the liberalisation was made "outside" these countries. Sophisticated financial assets were used in liberalisation process such as active swaps. Under high capital mobility none of the countries can be "an isolated island". The domestic currency is treated as any other commodity, thus, if a significant change of its price is expected, for sure there are some actors who are eager to speculate with the currency. This can happen no matter if there is or there is no proper macroeconomic policy in the country. External sources of growth finally cause loosening-up standards concerning monetary policy, as it seems that the economy cannot be affected by this policy under the circumstances. Such loosening of monetary policy standards may lead to mentioned monetisation.

There are also micro-factors that may result in crisis occurrence, i.e. financing domestic enterprises by the foreign currency credits, which are not covered by the insurance. It usually happens when foreign financing sources are cheaper than domestic ones. Moreover, good macroeconomic situation if combined with high interest rate and surplus in current account causes capital inflow, which makes the investors ensured of the exchange rate stability. Lack of credit insurance is associated with full confidence in foreign reserves availability and its active role in effective defence against speculative attacks. This role is understood either as the Central Bank intervention or only as making proper impression that the intervention can take place if needed. The role of the credits

that are not covered by the insurance depends on expectations regarding state attitude towards the enterprises. For example one can expect that the government supports micro level by keeping interest rate low and unchanged, and preventing from devaluation or that rather macroeconomic approach is favoured, which means quick devaluation, and relatively high increase of interest rate. Therefore, psychological and political factors are very important. When the private sector indebtness exceeds level of international reserves, the following questions arise: if the CB is willing to defend the exchange rate, and if it is able to do it.

Real exchange rate depreciation can be also causing the currency crisis occurrence (it refers only to the exchange rate regime). For instance, if disinflation is too big with regard to inflation rate changes in another "associate country", then appreciation takes place, which results in depreciation expectations among investors.

According to those factors in the literature one can find a big variety of the crisis prerequisites systematisation. Possible and common way of classifying them is to distinguish between internal and external crisis circumstances or between dependent and independent ones from the country's point of view. Reviewing the literature, it can be found that there are various types of crises, from different nature, and then different models to explain them. All of these models, however, are based on two polar points of views. First, it is believed that countries get into crises because they are running unsustainable economic programs and crises are bound to happen; an elegant rendition of these views is the model by Krugman. In the second place, another extreme view is that countries are at the mercy of the capital market. If investors believe the country is unworthy, no funds will be forthcoming and, thus, unworthy the country will be (self-fulfilling prophecies). This view is represented by Flood and Garber (1986) and, especially, Obstfeld (1986, 1995).

A modern approach towards currency crisis causes is presented in first-, second-, and third-generation models. The authors of the models tried to "catch" the combination of different factors, which finally led to the crisis occurrences. Experience of the countries, which went through the crises, played a key role in creation and modification of the models. Experience of Mexico (1973–82), Argentina (1978–81), and Chile (1983) contributed into evolution of first-generation models. Crises of Mexico (1994–1995), and in Europe (in the 90s) are linked to the second-generation models originally introduced by Obstfeld.
In this kind of models, speculative attack are explain on the basis of game theory and studying the rationale of joint behaviour. Now, we will introduce the simplest version of the model following Obstfeld (1995). Consider an economy with a fixed exchange rate regime and two investors. The investors have some amount of domestic currency (for instance Polish zlotys), which can be

exchanged to any foreign currency (to EURO). Each of them can exchange money or keep it. The monetary authorities are obliged to "defend" the fixed exchange rate regime. It is obvious that the authorities' ability to defend is strictly connected with the level of the reserves. If the reserves are exhausted, then the exchange rate floats. The investors play a non-cooperative, one-shoot game. The payoffs for each game depend on the level of reserves kept in central bank. There are three game options considered in the model: low-reserves, medium –reserves, and high-reserves one.

Let us look into the high reserves game. The fixed exchange rate will survive because the level of reserves is high enough. Therefore, both investors lose. The Nash equilibrium is sustaining fixed exchange rate. In a case of low-reserves game, the reserves can be exhausted when only one investor "attacks". The pay off (keeping in mind that the transaction costs must be covered) goes either to one investor, who takes all, or is shared by both of them. Nash equilibrium is eliminating fixed exchange rate. Medium-reserves case is the most interesting one. None of the investors is able to run the reserves alone.

If one investor attacks alone, he bears the transaction costs whereas the peg survives. If both of them attack each gains. Finally, what happens it depends on investors' expectations. If each of them believes that another one does not attack, the fixed exchange rate will survive. If each of them gets panicked following the impression that another one is willing to attack, both of them will attack, and the fixed exchange rate will float. There are two Nash equilibriums. The first is when two players attack and the peg falls. The second Nash equilibrium is in when the currency peg survives because neither player thinks that the other will attack. The model may be generalized to multiple players keeping the underlying idea. Hong Kong's experience of 1998 may be a good example of speculative attack[1]. Hong Kong was perceived as the one with extremely liberal approach towards economy. It is documented in the Hertirage Foundation list, which contains top ranking positions of the country. Hong Kong was described as a place, where people can do with their money, what they want, set free from arbitral state intervention that would not even "dare" to aim at capital flow control even at the smallest scale. Soros (Quantum Fund) and Robertson (Tiger Fund) convinced that with accordance to its liberal approach Hong Kong authorities would not make any intervention attacked. Nevertheless, Hong Kong authorities decided to abandon its liberal paradigm, and although neither devaluation nor any other activities pointing towards increase of domestic product competitiveness had ever been declared before, the authorities intervened. Still, the situation got worse even if Hong Kong authorities did not

[1] Paradoxically there is situation, in which working-out of a concrete and stable country image may be a reason for speculative attack.

do anything that they could be blamed for. There were other reasons like the crisis occurrence in other South-East Asian countries accompanied by devaluation that had been made there, which decreased demand of business products and services (B2B). Additionally, lack of devaluation in Hong Kong led to increase of relative prices at the same time discouraging the tourists to visit Hong Kong. Under these circumstances Hong Kong authorities decided to use international reserves. Intervention took place in the stock market, which resulted in increase of share prices and caused investors' losses (those who participated in the speculative attack). Intervention was undertaken despite Hong Kong authorities were risking the reputation of their liberal approach.

The main implications of this model are markets might be very sensitive to speculative noises and, hence, government should smooth all kind of social tension, institutional, political and economic problems.

The occurrence of the Asian crisis in 1997–1998 made an existing dispute between first-generation supporters and second-generation one more complicated. There were quite a lot of distinguishing features of Asian crisis that could not be covered completely by the existing models. It was hard to notice the symptoms that were described by first-generation models, such as: fiscal deficits, expansionary monetary policy, or high inflation. There were not also clear references to second-generation models: Asian authorities did not have to cope with a trade–off between political and economic goals. The currency crisis in Asia was preceded by boom-bust cycle in segments of the asset market (e.g., stocks, land prices, real estate). Moreover, the Asian crisis was an element of widespread financial crisis that consisted of bank runs, firm bankruptcies, and partial collapse of many financial institutions that operated in these countries. Considering all this, the third-generation models are concentrated on microeconomic imperfections, which, if combined with high capital mobility, may lead to speculative attacks, and finally the crisis occurrence. There are different concepts in the post-crisis literature that constitute the frames of third-generation approach (Krugman 1999; Redelet, Sachs 1998). Making a short and very generalised listing one can say that in the third-generation models attention is paid to "over borrowing syndrome", self-fulfilling pessimism of international lenders that makes the financial market very sensitive, bank-runs, and a loss of investors' confidence. Microeconomic approach is combined with macroeconomic perspective, which seems to be another step further in understanding currency crises.

Summarizing, according to second- and third-generation models investors' and other economic agents' expectations have an important impact on crisis emergence. Expectations can be shaped for months, and years while making observations of policy in/consistency, government credibility, evidences of central bank autonomy or of its lack, etc.

Additionally it is worth of stressing that some groups of countries close geographically or economic are very often perceived by the investors as monolith area. Foreign investors, especially speculators may make decisions concerning a given country on the base of situation in the region, the country belongs to. And they are likely to transmit their behaviour from one market to another making their decisions. Other side of the situation is fact, that regions compete among each other for capital. The financial market in global financial world are like join vessels, and in the case of perturbations in one region investors would like to compensate their loses changing their position on other markets. For that reasons some countries are treated as "innocent victims" due to the fact that they suffer from the crisis not because they were lacking of proper macroeconomic policy or by reason of objectively measured bad economic standing but as a consequence of their negative image created by the investors, who perceive those countries in a certain, predefined way no matter what their real macroeconomic characteristic features are like. The investors' usual modus operandi is to put the label of the country group such as Central and Eastern Europe or Latin America "club member" without considering real and fundamental differences among the "club members". In such a situation there is a possibility that capital outflow in one country may cases the capital outflow as a reaction to the crisis emergence in the country that is perceived as a similar one by the investors (for example, because of similar level of budget deficit or for any other more or less rational reasons). There is a natural tendency of the investors to compensate the losses caused by the crisis withdrawing the capital from the "innocent victims".

In our opinion, one should consider an important question what kind of "country image" has already been created for ECC countries, and how the economy is able to respond to different external shocks. Transition economies have usually been described as those that are more exposed to shocks. While analysing transmission channels one should concentrate on similarities of the CEE economies as well as on their economic linkages inside and outside of the region. It is worth mentioning that ECC countries have been very often treated as a monolith in economic, political, and even cultural sense, which may be very misleading especially if there is a need to make reliable assessment of these economies for example for policy co-ordination purposes.

2. Crisis propagation channels in context of globalisation

Even "healthy" economies may go through the crisis because of contagion called also "a domino effect". For example contagion was working when the crisis, which appeared in Thailand, provoked another crisis in South Korea or when a fall of Russian rubble brought about speculations against Brazilian real.

To understand the contagion effect and its relations to globalisation is very important to recognize how the shock is passed on for one country to another. The way of transmitting is called propagation channels.

In the literature one can find many possibilities of crisis spreading around. For example, according to Habib (2002): "*the channels (...) are trade links, financial links, and re-assessment of country risk under new global economic conditions"* Gelos and Sahay, (2001) additionally show that *"...trade linkages can be direct, that is, due to trade among the affected countries, or indirect, i.e., through competition effect on third markets or through commodity prices.* They also state that financial linkage *"...can take form of the exposure of one country banking system to another country's debt"* and that *"... there may be global shocks which simultaneously affect various countries, such as an increase in US interest rates*". On that aspect of propagation Darvas and Szapary (2000) also pay attention stating "…*changes in industrial countries' economic policies might induce capital outflows from emerging markets irrespective of their economic fundamentals.*

Resuming following contagion channels may be distinguished:

- Trade channel connected with the regional and global trade integration;
- Financial links connected with the globalisation of capital flows and many new financial instruments;
- Investors' expectation (Fratzscher 2000).

The Argentina crisis in 1999–2002 can be considered as an example of crises caused to great extend by trade connections and market interdependence. In Argentina in those years the crises was observed specially in the international trade; the value of export increased only by 0,01% despite the increase in the quantity of exported goods by 13%. It was the result of the drop of the oil price and the agriculture good (especially crops) and the US dollar appreciation. Horrendous international situation and crisis in Brazil caused the disruption in the Argentinean car industry producing mostly for the Brazilian market. The circumstances in 1999 grew worsen together with the devaluation of Brazilian real. The cheap Brazilian real made the Argentinean import very expensive for Brazilian firms and consumers and caused the fall in Argentinean

balance of trade and made the trade deficit greater and greater (especially to Brazil whose export of agriculture goods to Argentina increased by 35%). The situation in industry was also bad: the production in textile and car industry fell by (respectively 30 and 43%) and the investment in industry still was decreasing by about 16%. It can be seen as a started point of crisis of period 1999–2002. (Radzikowski 2004)

Financial links connected with the globalisation of capital flows and many new financial instruments means that the capital flows coming from different point of financial words are shaped by investors interested mainly in profits, which treat investments and countries like occasions for making money. Open capital markets means without a doubt that the access to large world capital is almost unlimited especially thanks to new sophisticated financial instruments, but also it implies that the capital is very chaotic and prone to outflow. Looking at the financial connections we would like to stress that especially developing countries should open their capital accounts very carefully. Decision of its opening ought to be made with full awareness of domestic financial system abilities. The system should be strong enough to resist often-turbulent inflows and outflow of capital. It is probably good idea that trade liberalisation should go before capital account liberalisation. With the globalisation also other factors may be connected. As so far we focused on globalisation as a factor making the crisis occurrence more probably, but it should be stressed that the globalisation may also contribute to preventing crisis spreading around. We thing that at least two factors should be taken into account. Taking as an example United Europe and basing on the first model generation it is quite obvious that there are some regulations forcing crisis protection addressed to policy makers and forcing them to leading stable consistent domestic economic policy. In United Europe and for countries wanting to join EU Maastricht conditions play such preventing crisis role. But it seems quite obvious that meeting Maastricht criteria is necessary, however, not a sole guarantee of being prevented from the crisis incidence. Globalisation means that the good standards also in economic policy are wide spreading forcing countries to play according to good rules and making them not as potential reason for local or global crisis. To be honest we should notice that globalisation also could contribute to more massive attacks because speculators may joint their funds and attacks much more countries having at disposal much more reserves.

Another factor connected with globalisation comes from the attempts to avoid the crisis. It mainly refers to three possible solutions: interest rate policy, international reserve usage, and influencing investors' expectations. In all those areas the globalisation can play positive role. Interest rate policy means introducing proper interest rate level (high enough) to make the profits gained by devaluation be equal to the returns of domestic assets with accordance to the interest parity condition. There is no motivation to speculate with the currency, then. The policy task is to increase short-term capital inflow, and to weaken speculative attacks in this way. This kind of policy together with affecting investors speculation should and can be realize by country authorities, but globalisation may contribute to much more successful use of the way connected with international reserves. The sense of speculative attacks refers to the assumption that eventually the reserves run out and the depreciation will have place giving the opportunity to buy reserves at good price. So if the reserves were unlimited the attack would be of no avail. Globalisation may contribute to such scenario because it gives a country at danger to disposal fund from other countries. The case of Argentinean crises again me be an illustration. IMF supported the Currency board commitment from the very beginning and Argentina was given a number of stand-by-credits. Unfortunately it made Argentina the largest IMF debtor. Paradoxically in the December 2001, when it was most desirable, IMF removed next support.

Summary

Globalisation may be thought as a process of making economies more and more the same. It has to have impact on the occurrence of crises. On the one hand the policy is globalised, what contributes to perceiving countries as belonging to the same group. It also means that more and more countries realize the responsible, solid economic policy in conformity with world standards. Both of those phenomena can affect the crisis occurrence. On the other hand it means that all the propagation channels may be affected by globalisation. It is very good observed in the trade channel, where the integration and therefore interdependence is growing. Such dependence may make the economies very sensitive on the local perturbations. A good example is the global market for oil and the consequences of local changes in supply for all oil consumers around the world. The financial channel is shaped by the growth of international capital being at disposal for countries, what make them less dependent on domestic savings and therefore may make domestic policy especially monetary less robust and responsible. Additionally it exposures country at the investors, mainly

speculators, profit seeking policy. Globalisation also means that the countries became more identical, at least in opinion of investors. All those factors are a part of investors expectations, which are one of the most important contagion reasons, especially taking into account, that the meaning of financial channel is probably to grow.

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