

A Minsky-Keynes Perspective on the Crisis in New Member States of the EU

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The World Economy in Crisis – The Return of
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Abstract

This study attempts to explain the economic crash in the new member states by a Keynes-Minsky approach to financial fragility. This perspective reveals that the NMS do not suffer only from contagion. The severity of the crisis in this region compared to others is due to euphoric expectations build under the impression of EU accession and following euro adoption at the beginning of the decade. The transformation of the financial sector under the guidance of international banks and shadow banks was the major institutional contribution to the emerging euphoria – leading to internal and external imbalances. The outbreak of the financial crisis in the US was rather the pinprick to the asset price bubble in the region. The paper concludes that binding monetary policy to a quick fulfillment of the Maastricht convergence criteria contributed to increasing financial fragility and made policy blind versus the emerging imbalances. The paper argues

JEL codes: E51, G21, P34

I. INTRODUCTION

Output in the ten new member states from Central Europe (NMS) of the EU crashed more than in old EU countries, or in emerging markets of Asia and Latin America (Figure 1). The standard deviation of GDP decline jumped up, illustrating a strong asymmetric distribution of common shocks – compared with other regions. Countries with reduced monetary independence and with high trade openness (the Baltics plus Slovenia and Bulgaria) performed far worse than countries with floating exchange rate and larger domestic market (Poland even recorded a slight growth in 2009). One explanation could be mere contagion that some countries (Baltics) bit more than the others. I will seek evidence for another answer, namely for the region's own imbalances that make it vulnerable against contagion. If this answer held the NMS crisis would very much in line with the general reasons for the financial crisis, which found their origin in the internal and external imbalances of the USA. Insofar, policy conclusions would base on a combination of specific and general lessons.

Figure 1: Regional impacts of global crisis (unweighted means)

Nevertheless, my starting points are two characteristics of the region, making it distinct from other regions: Firstly, the NMS-10 were socialist planned economies until 1990, and started transition to a market economy afterwards. The establishment of the financial sector from scratch and its various transitions will be of special interest. I will show that countries implanted the rules and principles of modern (since the 1980s globalized) financial capitalism. Secondly, they are small open, sometimes super-open¹ economies, committed to adopt the euro after accession to the EU, and to obey the rules for fiscal and monetary policies (nominal convergence to the Maastricht criteria). I will argue that we will find the cycle of booms and busts Minsky (1982) described in his financial fragility hypothesis. The combination of financial sector transitions and euphoric expectation building after the year 2000 set the cycle of booms and busts in motion. The methodology applied in this paper is descriptive, backed by Keynes' and Minsky's approach to uncertainty in a monetary economy and by Minsky's financial fragility hypothesis.

The plan for the paper is the following: The next session will summarize the key ideas of the Keynes-Minsky approach to financial crisis in a global context. I will expand Minsky's approach to the international context by a simple yield curve model, hence to external imbalances, taking into account the specifics of small open economies and their exchange rate arrangements. This will provide the analytical tools for the third section, where I will point out the major determinants for rising internal and external imbalances in the region. I am convinced that the international banking sector plays the major role in this development. The fourth section discusses policy lessons, and the fifth section concludes.

II. THE KEYNES-MINSKY APPROACH TO FINANCIAL CRISES

Behavior under uncertainty

Why a Minsky-Keynes perspective? It is true, the history of capitalism is a history of crises, and there is a rich literature dealing with them. The possibly most impressive book on crises has been written by Kindleberger (2005). It is full of stories and detailed information, however, lacks systematization. Is there a common structure of financial crises, or is each crisis different? It seems that most of the literature in the aftermath of each crisis deals with the specifics of that crisis, for example a bank run as typical for a time when there was not yet any state deposit insurance (Diamond and Dybvig, 1983); a bank run was not the trigger of the present crisis – neither in the USA, nor in NMS as we will see later. 'This time is different' is the title of the book, Reinhart and Rogoff (2009) wrote about 800 years of capitalist crises, and it is intended to provide the systematization Kindleberger's book was

¹ As super-open, I mean a combination of a high degree of trade openness, of capital account liberalization, and of a super-fixed exchange rate arrangement that makes monetary policy impossible.

missing. The title of their book relates to a general attitude of opinion leaders to forget past experiences with crises and to assess the latest hausse on stock or other asset markets not at the herald of the next crash. Thus, such an attitude has been already described by Minsky (1982) and is the point of departure of his financial fragility hypothesis. And the answer to the question above reads: the starting point of Minsky's financial fragility hypothesis is the Keynesian view on uncertainty – and a precise reading of Kindleberger's book would reveal the strong ties between uncertainty and human behavior.

In his 1937 rebuttal to Viner's review of the *General Theory* (Keynes, 1937: 214) Keynes used the Wall Street board room paradigm: In an uncertain world, a financial investor (i) largely ignores the possibility of future changes about the actual character of he knows nothing, (ii) assumes that the *existing* state of opinion as expressed in prices and the character of existing output is based on a *correct* summing up of future prospects, and (iii) endeavors to fall back on the judgment of the rest of the world which is perhaps better informed. Or, as investment professionals use to say, that “past performance is no guide to future performance” (Palley, 2009). This is also the starting point for Minsky (1982), who summarized that an ongoing recovery in the economy leads financial and other investors to assume a continued recovery in the future, and the former recession/depression will be forgotten. Trend following behavior results: When asset prices show an upward trend, financial investors will be ready to accept assets with risks higher than normal in their portfolio, and they are ready to refinance the investment by higher debt. With increasing debt and more risky assets, the imbalance between debt positions and assets or between the cash flow and the debt service increases. A minor event can become the pinprick to the asset bubble, followed by a downturn or, in the worst case, a debt-deflation disaster. The crisis model is fundamentally dynamic and completely endogenous compared to the a-historic exogenous crisis models prevailing in the economics profession (for a brief overview see Borio and Drehmann, 2008: 5-6).

Keynes concentrated his attention on money and its relevance for effective demand and devoted only few remarks to the finance industry. Minsky put this industry into the centre of his analysis. The banking sector and its ability to create through credit new money hold the strategic position. Following Minsky's terminology of hedge, speculative and Ponzi financing, the banking sector belongs to 'speculative financing'. Corporations hedge against the uncertainty of cash-flows for pre-determined debt service by fixing a sufficient safety margin between both, and they finance investment more through equity than banks. The business model of banks is to lend and to borrow, and they have to obey above all to service interest payments on their own debt positions. In times of a boom with euphoric expectations, however, speculative financing can transform into Ponzi financing – which might become the trigger of an economy-wide crash.

The unholy trinity

Minsky focused on the US economy, hence on internal imbalances of a closed economy. The fall of Bretton Woods world economic order opened the way for the liberalization of capital flows and de-regulation of domestic and international financial markets. It changed the debt-

deflation scheme into a debt-exchange rate interaction (Wolfson, 2002), where internal imbalances turn into external imbalances. When this new world finance order has already achieved an advanced stage at the beginning of this decade, the transition countries joined it. The specific problem of these countries and all emerging markets is that their currency is not an international reserve currency. It cannot be used to borrow abroad or to borrow long-term. Due to this defect, the yield curve of a financial investment in non-reserve currency includes a risk premium, which does not disappear even if government and central bank followed the policy model of the reserve currency country: Pagano and van Thadden (2004: 20) show for the Euro zone that yield differentials have not disappeared completely despite some convergence. Risk premiums on German securities are lower than for Italian, Spanish or Greek ones. Gabrisch and Orłowski (2009) show for NMS T-bonds a high sensitivity to shocks of their differential to average Euro zone bonds. Eichengreen and Hausmann (1999: 330) explain the persistent differential in yields with ‘original sin’, hence, something very far in the past, but still in the memory of the markets. Otherwise, the strong attraction of US securities for investors from emerging markets since the end of the 1990s could be hardly explained – with the rising external and internal US imbalances. Income re-distribution matters: Higher yields have to be earned – usually by more inequality in income distribution. It is not by accident that income re-distribution in non-reserve currency countries including NMS (Milanovic, 1998; Gabrisch and Hölscher, 2006) has been accompanied by ‘financial deepening’.

A higher financial fragility of a non-reserve currency country is unavoidable, because all domestic financial investments show either a currency mismatch (projects that generate Polish Zloty are financed in Dollar) or a maturity mismatch (long-term projects are financed by short-term FX loans). Figure 2 illustrates this particular problem. Securities in domestic non-reserve currency have a yield curve above the yield curve in the reserve currency country due to the ‘original sin’ risk premium. The domestic investor prefers to borrow abroad to minimize his/her interest cost. The international lender is willing to lend, if the state of expectation of the borrower coincides with his/her own state of expectation. In a certain state of euphoric expectation, the international lender would even borrows short and lend short, which establishes the well-known phenomenon of currency carry trades. With a super-fixed exchange rate (like a currency board) and a zero exchange rate risk, the lender might even become ready to borrow short and lend long. All in all, the unholy trinity of capital liberalization, financial market de-regulation and having a non-reserve currency establishes an international Ponzi financing structure in the relation between lenders and borrowers, which might end in a crash, when debtors become unable to pay at least the interest on their debt in foreign currency. This has been proofed for the US, and the same story happened in the NMS.

Figure 2: A simple model with the yield curve

III. BOOM AND BUST IN THE EURO-CANDIDATE COUNTRIES

The story of the promising land

Akerlof and Shiller (2009: 90) found the big upturns on stock markets all over the world mostly accompanied by stories about a ‘new age’; similar to stories cited above. In fact, the promising land is bonanza with expected gigantic profits. In the transition countries, the later NMS-10, economic growth turned out moderate in the second half of the 1990s. Financial as well as corporate investors recovered from the early transition shocks and a period of macroeconomic instability and financial crisis that came to an end after the Czech financial crisis of May 1997, the contagion effects from South-East Asian crises and the Russian crisis in summer 1998. Since 2000, the recovery was transformed into a boom that peaked around 7 % real GDP growth on average in 2006. A popular explanation of the following crash seems to be the hypothesis of an overheated economy, at least in the Baltic countries. However, the acceleration of real output growth was accompanied by a deceleration of the consumer price inflation in the period considered even in the Baltic countries. Inflationary pressures returned only at the end of this boom period 2006 and 2007. At least in 2008, higher consumer price inflation was imported. Following Minsky’s analytical scheme, two issues are in the focus: euphoric expectations and the transformations in the still nascent financial sector after 1997/98. This will shift the view from an overheated real economy to the boom in financial asset prices and in the real estate sector.

Euphoric expectations emerged in NMS under similar circumstances. The approaching EU accession promised an expansion of trade and financial relations and many opportunities for higher capital yields than ever before. At this time and in line with the global state of opinion, international investors expected that real yields on capital into countries with low per head income and underfinanced but liberalized capital markets would be higher than in developed countries – the story is known from the earlier examples of Japan and South-East Asian ‘tiger’ and ‘dragon’ countries. Thirdly, the NMSs’ commitment to adopt the after a certain preparation period was taken as a pre-requisite for monetary stabilization – in terms of high interest rates and exchange rate appreciation.

The emergence of internal and external imbalances

The emerging internal imbalances found their expression in increasing private debt in international reserve currency. Interest rates in mortgages in Euro or Swiss Franc were below domestic rates and raised the attraction in real estate purchases with little capital and without any income in the foreign currency. The approaching EU accession and Euro adoption promoted a common belief in low exchange rate risks even in countries with a flexible exchange rate or with variable interest rates on mortgages in foreign currency (Slovenia). In Poland and Hungary, the share of foreign exchange credits in the total stock of private debt was higher than 50 % in 2007. In Estonia and Latvia with super-fixed exchange rates (‘currency board’), this share reached more than 80 % in 2008 (Martin and Zauchinger, 2009). Slovenia presents another example: Compared to 2002, the ratio of debt to total income of

private households increased from the threefold to the fivefold by the end of 2008 (Bank of Slovenia, 2009).

The countries became strong net capital importers (Figure 3a), and the share of portfolio and other capital investment (credits to and deposits in domestic banks) in private capital inflows increased (Figure 3b); the share of direct investment declined.

Figure 3: Net capital inflows in US-dollars (eight countries)

The debt-exchange rate mechanism was at work: increasing domestic debt was coupled with net capital inflows and an appreciation that overstressed the ability of the economy to earn sufficient exports for balancing imports and profit repatriation. Current account deficits soared, with Latvia at 23 % of GDP and Bulgaria at 22 % in the lead in 2007.

Income re-distribution

Schulmeister (2009) presents some figures illustrating that the real interest rate exceeded real GDP growth in after the fall of the fixed exchange rate system of Bretton Woods. 1972. Leading central banks feared more inflationary pressure and shifted to high-interest-rate policies. This raise in interest rates made financial investment more promising than investment into 'real' capital. The share of financial assets in total assets held by large corporations increased. A similar situation emerged in the NMS. Until 2003, real interest rates were well above the real GDP growth rate. The realization of higher yields from financial investment requires an appropriate inequality re-distribution of income. Indeed, this re-distribution started already in the early transition stage (Milanovic, 1998; Gabrisch and Hölscher, 2006). The ratio between the income of the 20 % of the population with the highest income and the income of the 20 % with the lowest income was pretty above the German ratio and also above the weighted average of old EU-15 member states (Figure 4) in 2000 and the gap widened until 2005. In part, this rise contributed to investors euphoric expectations over high yields of their financial investment.

Figure 4: Income distribution: Quintile ratio (ratio of income of 20 % of population with highest income to 20 % with the lowest income)

Financial sector transformations

The boom in asset prices was accompanied by specific institutional transformations in the financial sector, with the banking sector in the centre. The banking sectors in the region were consolidated and privatized with the assistance of multinational banks, which became parent banks of the domestic banks. In Slovenia only, the share of foreign banks in the statutory

capital of domestic banks was at 30 % in 2008, while in Estonia, Slovakia (and Croatia) this share reached almost 100 % (Badulescu and Bac, 2008). Domestic lending became dominated by multinational banks. Credit supply to the non-financial sectors became a function of parent banks' deposits in and credits to their domestic affiliates. With the international banks, the modern business of shadow banking including hedge funds and other Highly Leveraged Institutions (HLIs) arrived in the region, and with them new business models. The Bank of International Settlement (BIS) developed a pretty good measure for the impact of multinational banks on domestic lending, the 'foreign bank participation ratio in domestic lending' (McGuire and Tarashev, 2005, 2008). This ratio reached levels in new EU members, being remarkably higher than in Latin America and Asia, and approaching 100 % in most of them.² Poland and Slovenia only showed ratios of about 60% and 40 % respectively (Gabrisch, 2009: 336). Lending was and remained the dominant form of financing in post-socialist countries. The degree of market capitalization of stock markets was between 19 % of GDP (Slovakia) and 44 % (Poland) in 2007, compared with 74 % in the Euro zone. Also, the market capitalization of the corporative bond market is low: in 2007, fixed income securities were between 5 % of GDP (Poland) and 20 % (Czech Republic) compared with 81 % in the Euro zone (ECB Convergence Report, April 2008). Hence, with an overwhelming share of bank lending in corporate financing, the entire financial system of the region – including private corporations – was transformed into a 'speculative financing' scheme. Economists and journalists who praised the presence of international banks in their contribution to financial market stability in emerging markets through the import of new banking techniques and business models, of competition and safety, failed to recognize the increasing systemic risk stemming from a global banking crisis.

Secondary markets for trading with government securities were opened. Trading with 10years T-bonds started in January 1999 in Hungary, in May 1999 in Poland, and in May 2000 in the Czech Republic. Slovakia followed in January 2001, and Slovenia in March 2002. International investors found another field of engagement adding treasury securities into their portfolio. All countries reformed or established the law on real estate market between 1998 and 2002. The first market, which showed signs of a boom were prices for commercial estate (shopping centers, office buildings, logistic buildings, hotels) around the large cities. The commercial estate market is dominated by large European and German mortgage banks (EuroHypo, Rheinhypo), which cooperate with local banks or established own affiliates. Banks finance their lending by international emission of covered debt securities, and hedge against exchange and interest rate risks by derivatives on the appropriate markets. Commercial banks and HLIs were mainly active on the housing market. One of the new business models they brought with were FX credits (mostly in Euro and Swiss Franc) to private corporations and households. Within a brief period only between early 2005 and end 2008, housing prices inflated by more than 100 %.³ In Latvia, housing prices jumped by 160 % in one year, 2006 (Martin and Zauchinger, 2009). In post-socialist countries, the average citizen strongly favors

² According to the data, one has to calculate two ratios, a minimum and maximum ratio (see McGuire and Tarashev, 2005). The further considerations base on minimum ratios.

³ Hungary ist he exception; here, the housing price boom started already in 1999 and ended in 2006.

real estate in his/her wealth portfolio. This seems to be mainly a heritage of the socialist planned economy, when private wealth appeared mainly in (forced) money savings. But also, banking crises of the 1990s prevented the population to hold their money at bank deposits. Almost as a rule, the mortgage credits to private households covered more than 80 % of the real estate's value, in some countries (Poland), banks even paid out 110 % (*Global Property Guide*, 2009), so that sub-prime lending was not restricted to the US.⁴

Figure 5 examines the correlation between the macro speculative financing structure on the current account balance between the first quarter of 1999 and the fourth quarter of 2008 for the 10 NMS. The regression line is negatively sloped indicating that the size of the current account deficit is positively correlated with the size of the foreign bank participation ratio in domestic lending. One may also conclude that a current account becomes positive at about a ratio of less than 30 % - which seems to be confirmed by the German example, but also by other emerging markets with less ratios and export surpluses.

Figure 5: Correlation between current account position and foreign bank participation ratio in domestic lending (between first quarter 1999 until fourth quarter 2008; 480 observations).

The bubble bursts

Speculative financing is always threatened to drift into Ponzi financing when the general situation deteriorates. The situation was already fragile in Hungary and Latvia in 2006. Latvia's government tried to unload the house price bubble by restrictions on real estate purchases without own capital and on 'speculative' trading, and it introduced documentation of the origins of capital. Hungary's government tried to consolidate the state budget by retrenchments in 2007. The Minsky-moment was reached in the entire region in September-October 2008, and the Lehmann Brother default in September was the trigger of the crash on stock, security and housing markets that followed. HLIs cleaned their portfolios with non-US securities and shares after the price of US securities have plummeted. Drastically deteriorated expectations caused harsh depreciations of currencies with flexible exchange rates affecting the housing market, financed by foreign currency credits. Today, the traditional first sign of a crash – a bank run with long lines in front of banks – is rather seldom, since governments dispose of packages of measures to stabilize confidence in the banking sector, including guarantees on deposits of the population. A bank run occurred in early November 2008 in Latvia only. But there is a modern form of a bank run – the withdrawal of deposits in and credits to banks by other financial institutions. In the NMS region, parent banks reduced their engagement in their domestic affiliates. The rapid decay of the values of toxic assets in the parent banks threatened their ability to pay interests due. They retrenched their credit and deposit engagement in NMS banks, and the private household and corporative sector started to suffer. Add second round effects: With restrictive credit availability, corporations could not find re-finance of their working capital and reduced production and, declining world trade hit the exports of the countries.

⁴ Only late, in 2007, the Latvian government tried to unload the real estate bubble by the provision that a buyer has to present at least 10 % equity.

IV.

V. MONETARY POLICY REACTIONS AND LESSONS

Monetary policy: how to deal with uncertainty

The important role of uncertainty has been an essential problem of monetary economics at least since the Keynesian revolution. Keynes made a distinction between what is known for certain and what is only probable: *'The game of roulette is not subject, in this sense, to uncertainty (...). The sense in which I am using the term is that in which the prospect of a European war is uncertain, or the price of copper and the rate of interest twenty years hence, (...) or the position of private wealth-owners in the social system in 1970.'* However, the problem in today's economics is not the unpredictability of a financial event like a crisis, but the treatment of uncertainty in economic models.

In his LES lectures in June 2009, Paul Krugman criticized the state of the profession in its inability to 'predict' the recent global financial crisis, saying that economic writing during the last 25 years was useless if not harmful ('The Dark Age of Economics'). In an open letter in September, David K. Levine of Washington University St. Louis blamed Krugman of unawareness of the economic literature of the past 25 years. He wrote: *'Do physicists get it wrong because their theory says that they cannot predict where a photon shot through a sufficiently narrow slit will land? Economic models are like models of photons going through slits. Just as those models predict only the statistical distribution of photons, so our models only predict the likelihood of downturns - they do not predict when any particular downturn will occur. Saying "most economists failed to predict the downturn" is exactly like saying most physicists failed to predict the impact of the twelfth photon passing through the slit.'* What Levine assumes is a normal (Gaussian) distribution of events.⁵ Mainstream economics have transferred this assumption to social and economic life. They assume a crisis to be like a stochastic event, and that the economy has a gravity point (normal distribution) to which the economy is pulled back. Insofar, mainstream economics recommend a non-discretionary, instrument or targeting rule-based policy approach with adjustments of the short-term interest rate as the predominant policy tool, and a single goal, most commonly an inflation target.

But this approach loses ground, if the distribution of economic variables in time is not normal. Empirically interested economists are usually concerned with two problems when using long time series in regressions. The first problem is that of a leptokurtic distribution with unstable volatility in the variable. Most prices in financial economics show a leptokurtic distribution with thick tails (Mishkin, 2009). The second problem is the well-known 'memory' in the error process in regressions with financial variables ('conditional heteroskedasticity', see Engle et al., 2007). Both phenomena leave no room for constructing an economic model that calculates economic behavior like the distribution of photons or, as US investment banker George Cooper (2008: 148) expressed it *'as though it were driven by a series of coin flips'*. Rather, they confirm endogenous financial fragility.

⁵ The distribution of photons can be easily transformed into a normal distribution, like a series of coin flips.

If a leptokurtic distribution takes place, volatility of variables is well-contained during normal market periods, but it tends to jump significantly at turbulent times. Rigid instrument-rules á la Taylor are derived from tranquil economic conditions and tend to severely underestimate de-facto risks. This notion follows the critique of the Taylor rules by Svensson (2003) and Orłowski (2009) that at times of elevated interest rate risk epitomized by its asymmetric as well as a leptokurtic distribution, compliance with such rules becomes implausible. With such a parsimonious approach, monetary policy is doomed to be blind against the broad variety of risks like credit risks, default risks, liquidity risks, exchange rate risks, discretionary policy currently is dealing with, but which were already in the data before the crisis broke out. Economists, who deal with financial crises, developed early warning systems (Kaminsky, 1998; Brüggemann and Linne, 2002, for the European transition countries). These models use the concept of conditional probability: some event A (a crisis in a certain year) given the occurrence of some other event B (crisis in a former year), and they observe the data in the tranquil period between both events. Unfortunately, these models have still little impact only on prevailing m

Specific lessons from and for NMS

NMS follow a peculiar policy, which is guided by the commitment of adoption of the Euro and the Maastricht criteria of nominal and monetary convergence: a low inflation rate, low long-run interest rates, exchange rate stability, and low fiscal deficits and public debt. Monetary policy was abandoned almost completely in four of the countries: Bulgaria, Estonia, Latvia, and Lithuania; the monetary regime is a currency board, which is close to the historic gold standard in its effects. The central bank of a currency board country is able to inject liquidity into the economy only by borrowing from IMF and foreign banks, sovereign as well as commercial ones. Private debt will be changed into public debt, undermining the fulfillment of the Maastricht criteria.

The exchange rate of the other countries is flexible (for Slovenia and Slovakia until euro adoption in 2007 and 2009), and their central banks are able to inject fresh money into the economy using the re-discount window or open market policy. However, the commitment to fulfill the Maastricht criteria restricts monetary policy not less than the gold standard did. Actually, central banks were reluctant to follow the drastic decline of policy rates in the leading economies, since they feared a strong outflow of capital and an even stronger devaluation of their currencies with higher inflationary pressure. In the pre-crisis period, starting in about 1998/99 central banks moved towards direct inflation targeting with the interest rate as the single instrument tool.⁶ There seems to be a general consensus that the present crisis necessitates discretionary monetary policies. However, when the crisis once will be over, should policies promptly seek to ‘the set of principles for setting interest rates that worked well during the Great Moderation’ (Ahrend, 2008; Taylor 2009)? The leptokurtosis

⁶ Empirical investigation, whether policy rules were followed by the countries, however, brought mixed effects (Orłowski, 1998).

of key policy variables provides a strong cases against such a return. Here is a list of opposite recommendations:

- More discretion and un-orthodox measures,
- Central banks should expand their analytical approach to financial market risks and consider in their monetary policy (asset prices belong into forecasting models!),
- The development of early warning systems should enter the research agenda ,
- In case of signals of increasing financial fragility, central banks should declare to employ all available tools to unload emerging bubbles – even in the yet tranquil period,
- Euro adoption should be carefully evaluated.
- Monetary policy should ensure that real interest rates are below real output growth in order to attract more investment into real than in financial assets.

Such policy might reduce the risks of a crisis, but possibly at cost of higher pressure on the consumer price level. Therefore, euro adoption should be carefully reevaluated. Pre-mature euro membership might reduce the exchange rate risk but increase market-, credit-, liquidity and other risks. Monetary policy should gain from macro prudential policies, which include measures for protection against undesired capital inflows (FX taxation of speculative trading) and for strengthening automatic stabilizers in the budget sphere.

VI. CONCLUSIONS

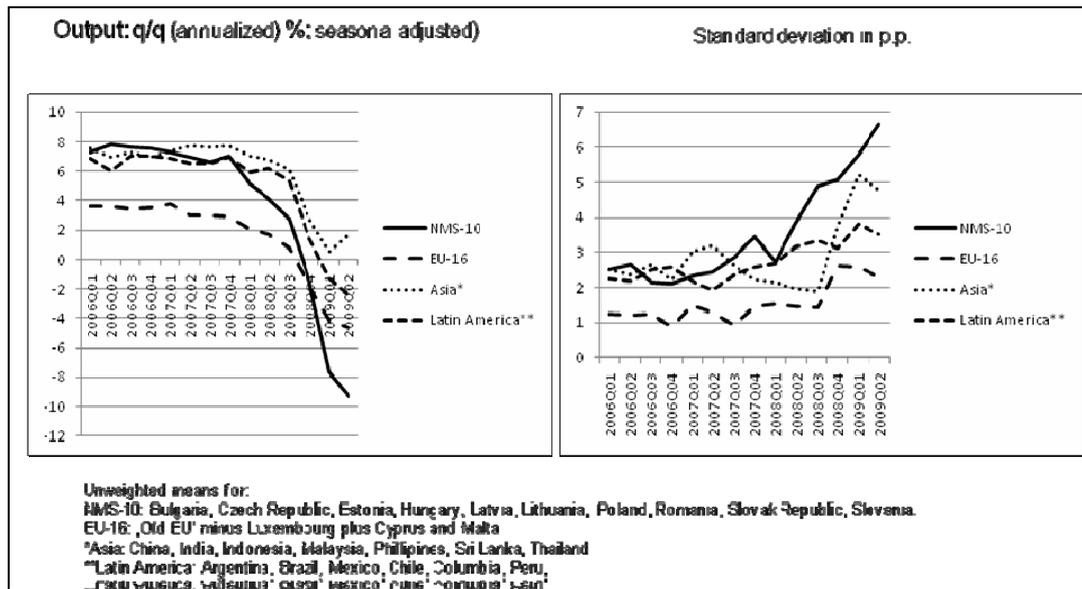
I was seeking evidence for an explanation of the severe economic crisis in NMS beyond mere contagion. This answer can be found using the framework of an endogenous theory of booms and busts – the financial fragility hypothesis of Minsky. I found euphoric expectation building at the beginning of this decade combined with transformations of the financial sector to be the main reason for the boom and the crash that followed. I moved the role of the multinational banking sector into the foreground of any understanding of this cycle. Also, I found that monetary policy was blind against the increasing instability – mainly in form of current account imbalances. Dominating policy models in the countries, taken from the international pattern, neglect the threats stemming from a leptokurtic distribution of monetary key variables. One-goal-one-instrument policies are blind against the vulnerability against shocks. It is necessary to revise the policy approach, and with it the binding of policy to a quick fulfillment of the Maastricht convergence criteria of euro adoption.

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Figure 1: Regional impacts of global crisis (unweighted means)



Sources: IMF (2009); author's presentation.

Figure 2: A simple model with the yield curve

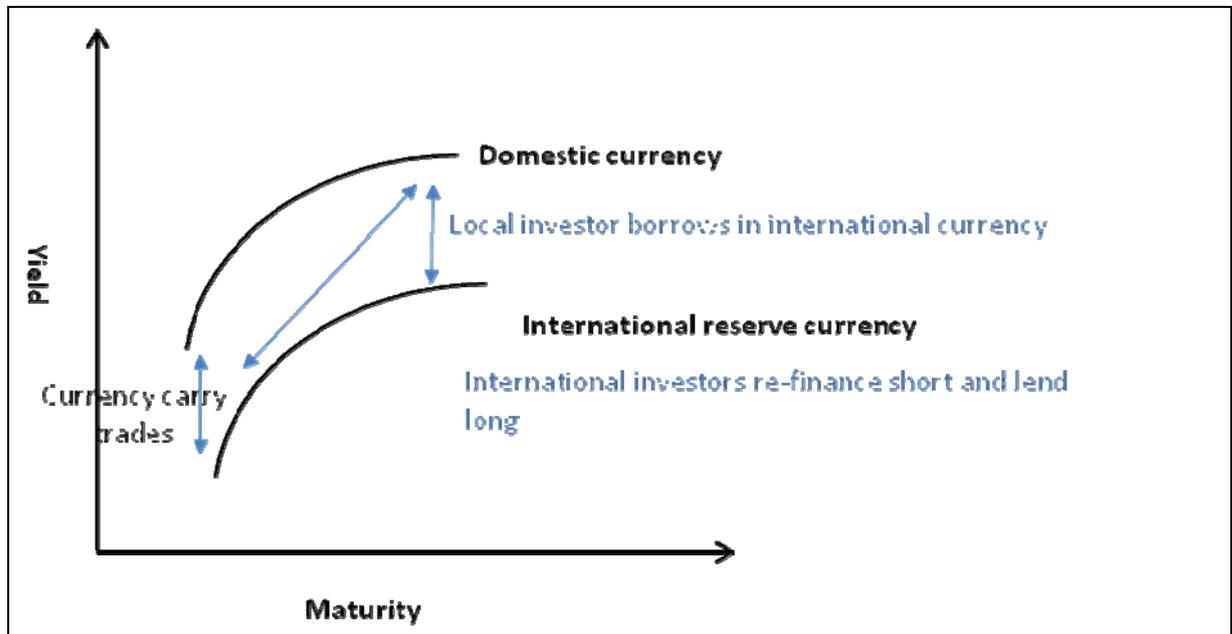
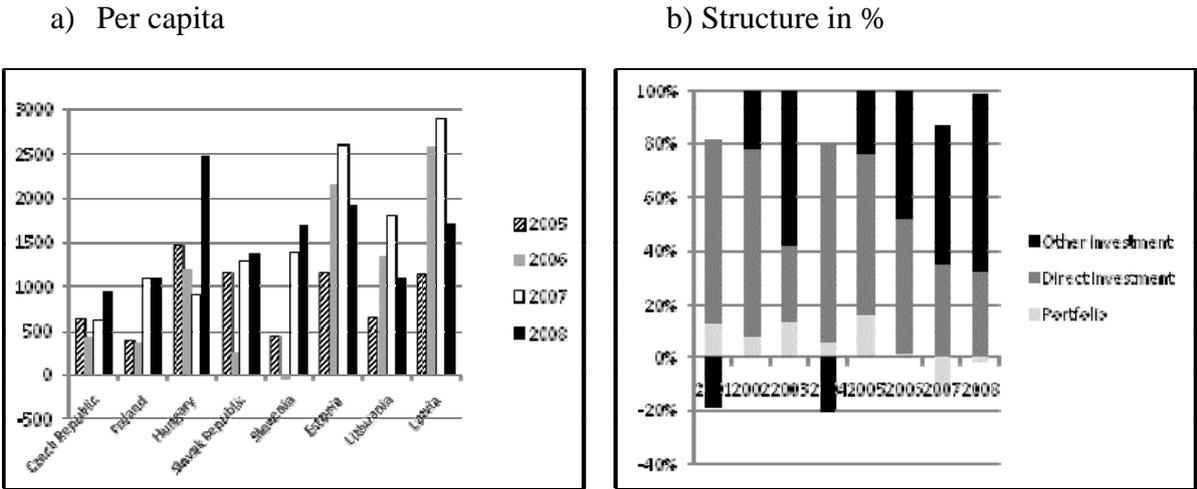
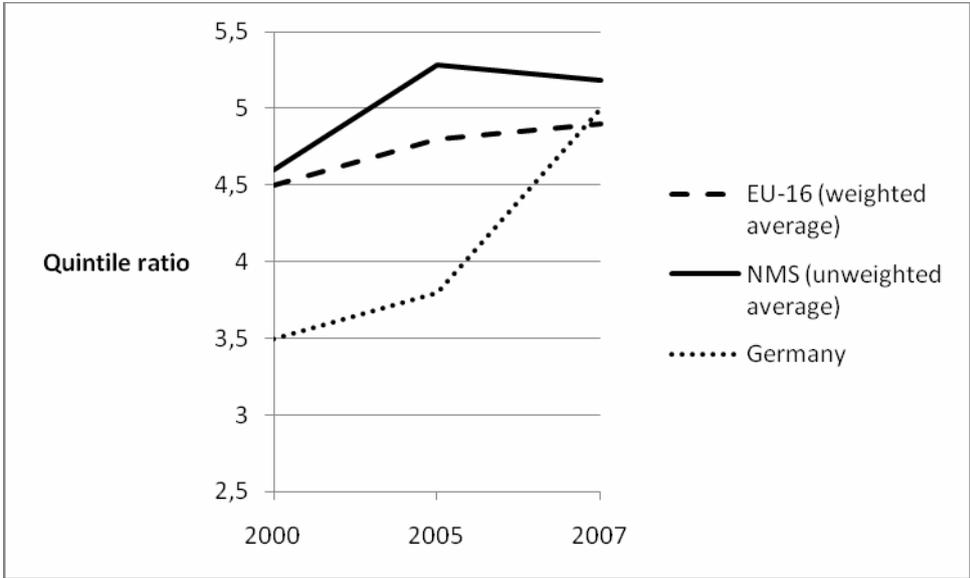


Figure 3: Net capital inflows in US-dollars (eight countries)



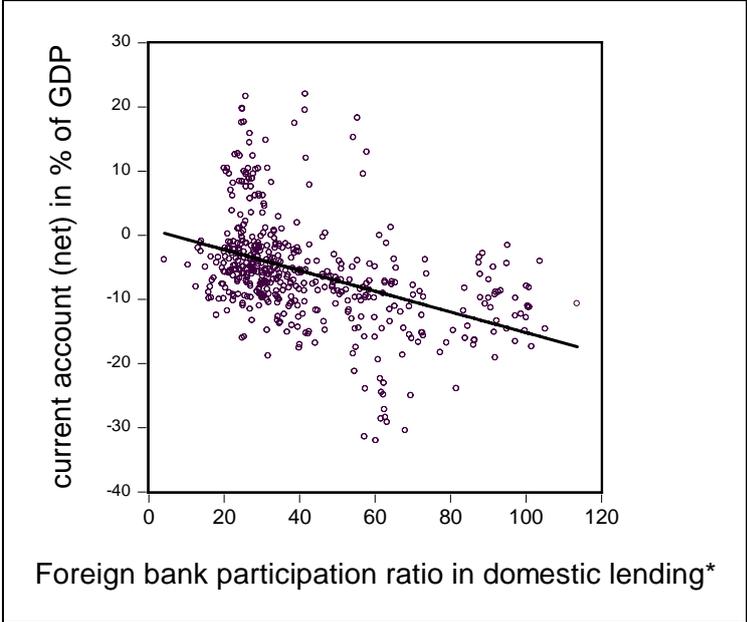
Sources: IMF, International Financial Statistics, 2008; author’s calculations and presentation.

Figure 4: Income distribution: Quintile ratio (ratio of income of 20 % of population with highest income to 20 % with the lowest income)



Source: Eurostat online; Income and living condition statistics; author’s calculations and presentation.

Figure 5: Correlation between current account position and foreign bank participation ratio in domestic lending (between first quarter 1999 until fourth quarter 2008; 480 observations).



Sources: Own calculations and presentation, based on IMF, International Financial Statistics, and BIS data.