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Monetary Policy and Inflation in the European Monetary Union – Perspectives and Lessons

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Abstract:
The paper examines systemic changes in monetary policies in Europe that have played a pivotal role in containing inflation. It emphasizes the connection between the systemic evolution of monetary policies and the precepts of the original as well as the new generation policy models prescribed by the 'Washington Consensus'. It further underscores the importance of key criteria of optimum currency area (labor mobility, trade openness, symmetric consumer preferences and political integration) for viability and further future enlargement of the euro area. For the candidates to the euro flexible inflation targeting policies that encompass the euro-convergence parameters are suggested.

Keywords: European Monetary Union, inflation targeting, optimal currency area, euro enlargement.

JEL classification: E42, F15.

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I. Introduction

The introduction of the euro in 1999 marked an important threshold within the process of deepening of the European integration. Yet the road to adoption of the common currency was not smooth – the countries that decided to join the common European currency system had to synchronize their fiscal and monetary policies through decisive and at times painful disinflationary and budget-balancing procedures. The euro-convergence process was undoubtedly a monumental effort, considering vast economic imbalances that existed among these countries prior to the Maastricht Treaty of 1991 that officially launched the euro inception program.

This paper overviews a systemic evolution of monetary policies in Europe that lead to the inception of the euro in 1999. It also discusses the policies of the EU new member States (NMS) that are intended to guide these countries to a risk-free adoption of the euro in the foreseeable future. Monetary policy adjustments by the founding members of the euro provide valuable lessons for the current convergence policies of NMS that joined the Union in 2004 and 2007. In order to adopt the euro, they need to reach a satisfactory level of price stability as prescribed by the Maastricht convergence criteria, i.e. domestic inflation rate not exceeding 1.5 percent above the average rate of the three lowest inflation countries. Since low, sustainable inflation is viewed as a predominant outcome of credible and successful monetary policies, this analysis will focus on the policy regimes that have secured price stability in Europe over the past 50 years, i.e. since the launching of the European integration process by the Treaty of Rome in 1957. In essence, the most successful disinflationary policies were initially based either on monetary targeting or on exchange rate pegs. Monetary targeting was followed by larger European countries, i.e. Germany and France, while smaller economies initially embraced currency pegs. In a more recent period, a number of European countries that have not adopted the euro yet follow fully autonomous policies based on direct inflation targeting. Such policies are believed to be conducive to a smooth adoption of the euro by NMS in the future (Orlowski, 2005a).

Since this paper is devised as a policy discussion study, it is not intended to provide comprehensive empirical evidence of superiority of one policy regime over its alternatives. Nevertheless, some data on inflation trends in different time periods and under various policy regimes are presented.

Section II contains a brief overview of the systemic evolution of monetary policy regimes in NMS over the past two decades. Theoretical foundations of a common currency area as outlined by Mundell (1961), McKinnon (1962) and Kenen (1969) are overviewed in Section III. The historical record on EU monetary policies and their inflationary effects is encapsulated in Section IV. Sections V and VI focus on monetary policies that are believed to be effective for the euro-convergence. Section VII extracts main lessons from the systemic evolution of monetary policies in Europe over the last 50 years and presents some suggestions for future policy modifications.

II. Systemic Evolution of Monetary Policy Regimes in NMS

It is worthy noting that systemic changes in monetary policies in NMS over the past 20 years have been generally consistent with the evolution of the strategies outlined by the so-called first and second generation models of the 'Washington Consensus'[1]. The original models derived from the 'Washington Consensus' were based on simple precepts of a free market system, namely *stabilization, privatization* and *liberalization.* These policies have been adopted in a number of emerging market economies and carried over through disciplined public finance, trade and financial liberalization, privatization of state-owned enterprises and financial institutions, far-reaching deregulation and monetary regimes based on fixed exchange rates (Williamson, 1990). Monetary policies that were based on currency pegs were in essence non-autonomous, as they were based on pegging national currencies to one (or more) of the leading industrial countries' currencies. Such arrangement allowed policy-makers to 'borrow' credibility from a foreign central bank, which was essential for establishing initial, favorable conditions for price stability in a domestic economy. More autonomous policy solutions were not plausible during the initial period for a number of reasons. First, such policies could not be credible. Any attempt of a central bank to tighten credit was unlikely to stem inflationary expectations as long as public perceptions of the policy action were rather leery. A tightening action could do little to lower the scope of nominal indexation of wages and prices of goods and services. Clearly, a foundation of policy credibility had to be established first in order to conduct effective monetary policies under more autonomous policy regimes. Second, financial markets in transitional and emerging market economies were not sufficiently developed to provide useful signals for forecasting inflation and other key policy variables that divulge information indispensable for appropriate policy actions. Under such circumstances, central banks in smaller economies were in fact 'policy-takers' or close followers of policy directions of the monetary authorities in the countries their currencies were pegged to. In quintessence, exchange-rate-based monetary policies could not be effectively used to counteract real economy and financial shocks, thus to mitigate the elevated inflation and interest rate risk premia (Orlowski, 2003).

The global financial crises episodes, particularly the Asian 1997/98 and the Russian 1998 crises, have proven that exchange-rate-based monetary policies cannot be effectively used for lowering inflation, reducing real currency appreciation and containing large current account deficits. In order to accomplish the goal of price stability, monetary policies had to be supported by appropriate institutional reforms. Learning these valuable lessons from the currency crisis episodes of the 1990s, monetary authorities in a number of industrial as well as emerging market economies have switched to more autonomous monetary policy regimes. It was thus necessary to find an effective anchor for monetary policies as a viable alternative to currency pegs that would allow for achieving price stability. The choices were rather limited. Money growth targeting could eventually contain inflation very effectively by imposing strict limits on expansion of money balances. However, this policy framework could not be implemented in a number of industrial and emerging market economies due to excessive

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[1] For a detailed analysis of the evolution of the macroeconomic stability models consistent with the early and the most recent versions of the 'Washington Consensus', see Rodrick (2007).

instability between money growth and inflation as well as other key monetary variables such as exchange rates and interest rates, as proven empirically by Orlowski (2004). Income targeting was another widely-debated policy solution. It would have to rely, however, on real income growth targets that would normally call for expansionary monetary policy even at times of elevated inflation expectations. Targeting real income would certainly exacerbate inflationary pressures in the presence of nominal indexation of wages and prices[2]. Considering such systemic pitfalls, marketed prominence has been gained by policies based on *direct inflation targeting* (DIT) that have in fact helped contain inflation, simultaneously preventing the perils of real currency appreciation.

In general terms, inflation targeting is a monetary policy framework that is geared to achieving a pre-determined target for inflation. It serves as an effective medium for guiding the private sector inflation expectations to the level prescribed by the credible, low inflation target; at the same time, it allows for enough policy discretion to curtail major shocks to financial stability. DIT is commonly defined as a monetary policy framework in which a central bank adopts and publicizes an explicit numerical target for inflation and assumes this target as the primary policy objective. As argued by King (2005), DIT combines two distinctive elements of successful monetary policy: a medium-term inflation target anchoring expectations, and a sufficient degree of policy discretion for mitigating shocks. Thus in essence, DIT is guided by a "constrained discretion" (Bernanke, et al., 1999). It is because it combines the discipline of a policy rule, i.e. a binding inflation target, usually accompanied by a prescribed reaction function, with a certain degree of discretion or flexibility. Under normal conditions, the numerical, explicit inflation target entails an inflation tolerance band or a set of circumstances allowing for temporary target overshooting. This in turn permits discretionary policy actions aimed at correcting shocks to inflation. In practical terms, DIT shall not be based on a rigid instrument (interest rate) rule or a compulsory policy reaction function that prescribes instrument responses to a set of conditional economic variables (King, 1996, 2005). Simple instrument rules (such as open-economy Taylor rules) are likely to generate suboptimal results in the presence of large, potentially destabilizing shocks (Svensson, 2003). It shall be emphasized that DIT is intrinsically accompanied by a flexible exchange rate regime. It is because an alternative combination of a currency peg and an (indirect) inflation target would entail a number of policy conflicts that could pose serious risks to financial stability. In the case of open emerging market economies, DIT ought to consider an auxiliary exchange rate stability objective (Ball, 1999; Mishkin, 2000; Eichengreen, 2005; Orlowski and Rybinski, 2006), due to a serious risk of transmission of exchange rate shocks to price volatility.

It is worthy noting that DIT accompanied by flexible exchange rates is viewed as an integral part of more comprehensive macroeconomic policies consistent with the so-

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[2] A revealing lesson on experiments with regimes alternative to a currency peg is provided by the National Bank of Poland, which enacted interest rate targeting in 1996, followed by a brief period of monetary based and broad money growth targeting during 1997 and 1998 – all proven to be unsuccessful in containing prolonged, double-digit inflation (Orlowski, 2004).

called second generation models of the 'Washington Consensus'.[3] The proponents of the original, first generation models had a tendency to embrace rules-based rather than discretionary monetary policies since rules were meant to discipline the malfeasance of governments (Rodrick, 2007). Consistently, central banks opted for explicit policies based on currency pegs that played a critical role for restraining government spending and nominal indexation of wages and prices. In contrast, the second generation models have engendered a considerable degree of monetary policy discretion along with flexible exchange rates drawing painful lessons from the disastrous consequences of overvalued currencies, particularly in Latin American and East Asian economies.

Yet the tasks of convergence of NMS to the euro go beyond the standard set of policy prescriptions offered by the modified 'Washington Consensus'. The euro candidates face serious constraints to their policy discretion. Monetary convergence becomes effective when inflation rates, bond yields, basic consumer and producer prices in the candidate countries 'converge' or come closer to their corresponding levels and trends in the common currency area. Thus in essence, monetary authorities in the converging economies act increasingly as non-autonomous 'policy-takers' rather than independent 'policy-makers'. On practical grounds, more pronounced constraints on monetary policies stem from the Maastricht convergence criteria and the ERM2 (the exchange rate mechanism 2) that impose restrictions on permissible currency volatility. Thus reducing volatility or mitigating the exchange rate risk needs to be re-instated as a leading or a supplemental monetary policy target (Orlowski, 2005a). It may well imply that monetary policy strategy in NMS will have to make several sharp turns by starting from the currency peg, followed by a switch to fully autonomous inflation targeting and ultimately coming full circle to exchange rate stability as necessitated by the ERM2.

Ultimately, the candidates will have to lay out institutional foundations for a common currency system as prescribed by various theories of an optimal currency area (OCA). As these theorems imply, achieving ripeness for the (common currency) euro adoption takes time. In line with this reasoning, a unilateral leap to the euro in the way suggested among others by Begg, et. al (2003), could create a clash between the new monetary policy and the under-reformed institutions, unprepared to function effectively within the new set of conditions. In essence, a unilateral fast-track adoption of the euro may exacerbate the default risk of the candidate countries. Therefore, broad institutional reforms consistent with the basic precepts of OCA theorems are indispensable.

III. Euro as Optimal Currency Area – Theoretical Underpinnings

The original idea of a common currency for Europe was born on the grounds of a slower economic growth of the European economies relative to that of the United States and other industrial countries back in the 1960s and the early 1970s. This phenomenon was commonly labeled as 'the Eurosclerosis'. Among the factors contributing to the straggler

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[3] Other precepts of the 'second generation models' include improvements in corporate governance, poverty reduction programs, reforms of social safety nets, anti-corruption legislation, more elaborate financial codes and standards, as well as other institutional reforms whose examination lies outside the boundaries of this study.

growth in Europe were growing asymmetries between the countries, as well as high currency transaction and translation costs. The asymmetric effects were quite pronounced – real GDP growth rates were rather unbalanced and inflation rates were largely dispersed. As shown by the data in Table 1, inflation was particularly severe in Italy, less pronounced in the United Kingdom and France and the lowest in Germany, especially during the period 1970-1985. Amid concerns about the prevalent asymmetries, the idea of a common currency became increasingly attractive. It was commonly believed that the unified currency would bring a number of significant benefits including elimination of large transaction costs and exchange rate risk that in turn would reinvigorate trade and investment. Moreover, it would possibly diffuse asymmetric shocks with the help of active fiscal policies within an OCA. Although it became apparent that a common currency could bring forth a number of meaningful net benefits, the European countries were not ready for a smooth convergence to a common currency area at that time. Nevertheless, the European state of affairs motivated several leading academic economists to articulate conditions and effective strategies for OCA. Prior to formulating these strategies, it became necessary to identify key economic and political criteria for OCA. The first one of the two economic criteria was to find ways to minimize asymmetric shocks. The second one was to identify specific economic areas that were unlikely to be affected by asymmetric shocks. The political criterion stemmed from a question whether and to what extent the participating countries would be willing to help each other cushion asymmetric shocks when they actually took place. Attempts to find answers to these problems gave rise to the three principal OCA theorems.

The fist OCA theorem was developed by Robert Mundell (1961). The basic idea underlying his approach is that OCA can only be effective if labor and capital, as the key factors of production, are perfectly mobile across borders. Only in such case, the costs of sharing the same currency will be eliminated. Moreover, since capital is likely to be perfectly mobile in the case of eradicating governmental restrictions on its international transfers, the fundamental problem is to eliminate the impediments to the mobility of labor. As argued by Mundell, in the two-country case when one of them is experiencing an excessive unemployment and the other struggles to reduce high inflation, an unhindered transfer of labor from the first to the second one would alleviate the fundamental imbalances in both countries. In this case, there is no need for price and wage change in either country since the exchange rate automatically adjusts to its real equilibrium level in response to the adjustment in the relative endowment of production factors. Nevertheless, the Mundell's perfect labor mobility scenario cannot be easily implemented in practice due to the existing rigidities that can be eradicated only in the very long-run. Among them are prevalent cultural and lingual differences among the nations, the reality of which cannot be easily circumvented particularly in Europe. Other rigidities to labor mobility include institutional barriers, which need to be coordinated through at times lengthy legislative process. Moreover, consumer preferences for various goods and services always differ among countries. This implies that workers producing specific goods in one country will have to be retrained to make goods suitable for somewhat different consumer tastes abroad. In hindsight, these impediments to labor mobility suggest that an effective introduction of OCA constitutes a seemingly lengthy process.

Nevertheless, even if the existing impediments to labor mobility prevail, OCA can still be effectively implemented in the absence of severe asymmetric demand shocks within its potential territory. Such seminal extension to the original Mundell model was proposed by Peter Kenen (1969). To reiterate Kenen's model, OCA can effectively function if it is not subject to large asymmetric shocks, particularly demand disturbances. Yet it is unlikely to envisage that large asymmetric demand shocks may prevail in today's integrated world, particularly in Europe. A change in consumer tastes (such as a tendency to favor larger, more comfortable cars) is likely to be transmittable across continents and countries as consumers become equally exposed to global marketing campaigns of multinational corporations or associations of producers. Also, changes in technology transfer globally rather quickly (new-generation high-definition TVs are available simultaneously across countries). Since large asymmetric shocks to consumer demand are rather unlikely, the euro-area seems to remain unscathed as an OCA. In addition, demand shocks are likely to be less pronounced in the economies that are well diversified and producing similar goods as weights on specific goods potentially affected by demand shocks in a total diverse basket of consumer goods are minimal. On the other hand, a shock in a country narrowly specializing in few products only may generate significant destabilizing effects. For this reason, OCA is likely to function much better in the case of large, diversified economies, according to Kenen.

The third consequential OCA theorem has been proposed by Ronald McKinnon (1962). In his scenario, OCA is formed by the economies that are open to trade and trade heavily with each other. It is because many international goods are indistinguishable from each other as they match global consumer preferences and product standards. Therefore, if the economies remain wide open and exports are not subject to trade barriers, there will be a tendency toward international equalization of prices of tradables (as prescribed by the Samuelson's price equalization theorem). Specifically, if there is a domestic currency appreciation (or depreciation) in foreign currency terms, prices of freely exchanged goods will rise (or fall) in domestic currency terms accordingly, thus disentangling the link between the exchange rate and the domestic inflation. The price equalization tendency will be therefore independent of the movement in the exchange rate. Thus in essence, wide-open, highly integrated economies are likely to succeed in forming an OCA.

A more recent, meaningful extension to the set of OCA criteria has been proposed by Paul De Grauwe (2007) who underscores the importance of political integration of the monetary union countries. The direct link between OCA and political integration can be explained in two distinctive ways. First, synchronized political actions may reduce asymmetric shocks that have a political origin. After all, fiscal policies in today's euro area remain in the hands of the national governments, while monetary policy is in essence conducted by the European Central Bank (ECB). Consequently, spending patterns, tax rates and budget deficits remain quite diverse within the union. However, from the standpoint of mitigating asymmetric shocks, the member countries are currently engaging in a fierce tax competition, which leads to more coordinated, lower taxes and simplified tax laws. Second, arbitrary political actions, particularly those affecting the labor market

(such as the 35-hour working week in France) are likely to exacerbate asymmetric shocks. In all, further efforts toward political integration are necessary in order to mitigate such shocks, thus to lay a more favorable ground for the monetary union to succeed.

To reiterate the OCA foundations, countries wishing to form OCA ought to be on the one side sufficiently symmetric, and on the other their labor markets need to be sufficiently flexible in order to be able to adjust to asymmetric shocks. In addition, they should display a high degree of trade integration, as well as political integration with other members of the union in order to reap the potential benefits from having a common currency.

In light of the above theoretical precepts, it remains debatable whether the current and the potentially enlarged euro area form in fact a viable and sustainable OCA. The existing literature provides a favorable and optimistic account for the ECB policies aimed at consolidating the euro area (Canova and Favero, 2007). The early studies preceding the euro inception were predominantly optimistic as well. Among others, Frankel and Rose (1998) suggested that although the euro area clearly violated optimality conditions of OCA at its early stage, it was well suited to satisfy them increasingly in the future, as the interplay between the economic and the monetary integration progresses.

The empirical evidence highlights the prominent role of ECB in consolidating the euro area as OCA (Canova and Favero, 2007). One should bear in mind that the euro inception strategy was a very risky scheme, yet the ECB managed the early stage of the euro existence very well. The risks to the euro introduction stemmed from prevalent asymmetries among the pioneer member countries – their economies were largely heterogeneous, their legal and regulatory systems plagued by vast historical differences, and their policy-makers preferences were not always set on the painful at times process of monetary convergence. Nevertheless, there was a substantial institutional progress in merging diverse monetary policies of the eleven central banks into a single policy framework managed by the ECB. Also, the harmonization of banking regulatory and supervisory systems was successfully completed enabling a smooth replacement of individual currencies by the euro.

During the past eight years since the inception of the euro, the ECB has emerged as a credible, highly transparent and accountable monetary authority, disqualifying the early doubts about the ability to achieve such a record by a young institution formed on the basis of previously untested experiments. Moreover, the ECB has managed to bring the euro area inflation rate to the low level that was unattainable for most of the member countries for decades (as shown in Table 1). A crucial role in the ECB success was in fact played by the bank's relatively high (although not perfect) transparency (Eijffinger and Geraats, 2006). Its board members have provided exhaustive explanations about their policy intensions and specific strategies. As a result, its operational framework and expected decisions have become clear and highly predictable to the business community as well as to financial markets and institutions. By matching actions with declared policy intensions the ECB have become a credible and reputable central bank in a remarkably short period of time. The second important factor contributing to the ECB overall success

was the strongly emphasized (although not very explicit) attention to lowering inflation, which resulted in guiding inflation expectations to the announced low target level.

The ECB monetary policy strategy has evolved as well. The initial policy framework adopted by the ECB Governing Council in October 1998 was based on three defining features. The first one - a predominant focus on price stability - implied that alternative policy objectives such as output growth or exchange rate stability received little to none attention. A specific target range for inflation was the second feature. However, the target was not specified as a midpoint for inflation based on a harmonized index of consumer prices in the euro area that would be surrounded by a tolerance band. Instead, the ECB stated that inflation should be 'below 2 percent' thus defining the target only in terms of its upper boundary. Finally, the so-called 'two-pillar strategy' was the third distinctive and a bit unusual feature of the ECB policy. The first pillar was adopted from the policy practice of the Bundesbank and was based on a quantitative reference value for the broad M3 money growth. The second pillar included a wide range of economic and financial indicators presumably affecting the outlook for price stability. Although it was criticized in a number of studies, the early ECB policy played an instrumental role for establishing solid foundations of price stability and for gaining vital policy credibility.

A major reformulation of the monetary policy framework was enacted by the ECB in May 2003. Evaluating soundness of the policy framework in terms of its outcomes and responding to the criticism of the two-pillar strategy, the Governing Council changed definitions of both pillars in the directions departing from purely monetarist foundations. Within the new framework, the first pillar is now prescribed as an 'economic analysis' that is essential for identifying short- to medium-term risks to price stability. The second pillar termed as 'monetary analysis' focuses on estimation of inflation trends and forecasts. In essence, the policy has become more forward-looking, thus aimed at guiding inflation expectations to the announced target. The target itself was slightly modified as well, becoming qualified as 'below but close to 2 percent'. Such re-statement made the target a bit more achievable, thus also more credible. In addition, the new policy focuses on medium-term price stability and on the existing differentials in local inflation rates in participating countries. The forward-looking, medium term inflation focus has become more realistic and plausible as the series of data that is indispensable for estimating inflation forecasts is now longer and more reliable.

In sum, the ECB has been able to manage inflation successfully through its relatively transparent policies emphasizing compliance with the inflation target. Moreover, the local or regional inflation differentials as well as spreads between member countries' sovereign bond yields have been compressed reasonably well. In spite of these successes, the remaining asymmetries within the euro remain to be quite large (De Grauwe, 2007). Countries like Ireland and Greece have recently experienced robust real GDP growth rates and positive output gaps (actual GDP exceeding its potential level). In contrast, Portugal and the Netherlands have encountered recessionary tendencies and negative output gaps. At the same time, regional inflation rates in the fast growing economies exceed the HICP-based average inflation. Moreover, since fiscal policies are

managed by local authorities, the euro area members do not show uniformity in fiscal discipline. Consequently, their real interest rates are elevated (most notably in Austria) and sovereign bond yields are higher than in the remaining member countries. Nevertheless, the euro area continues to function well as an OCA in spite of the remaining asymmetries.

The problem of internal asymmetries is also very important from the standpoint of the future enlargement of the euro area. NMS as potential candidates have considerably lower both incomes per capita and wage rates; their growth rates are much higher than those of the incumbent member countries and their sovereign bond yields contain considerable risk premia stemming from higher inflation expectations and excessive volatility of exchange rates (Orlowski, 2003, 2005a). For these reasons, the euro area is likely to experience more pronounced asymmetries following the admission of the new members. However, these imbalances can be reasonably expected to disappear gradually as the convergence of prices, wages and interest rates continues.

In sum, one can be reasonably optimistic about the future of the euro area considering its far-reaching consolidation thus far. However, full benefits from the monetary integration will be materialized only if there is a further progress in resolving the current economic and political asymmetries or discrepancies between the incumbent and the candidate countries.

IV. Disinflation and Euro-Convergence – The EU Historical Record

The attractiveness of long-term net benefits of OCA as identified by its main theories motivated the European leaders to devise plans for introducing a common currency. The first comprehensive attempt to do so was encapsulated in the Werner Report of 1970, following the Hague Summit of 1969. The Report called for establishing the EMU by 1980, which failed to materialize as it relied almost exclusively on coordination of exchange rates without an adequate focus on fiscal and monetary convergence. The high inflation episodes in the early 1970, accompanied by real appreciation of currencies in the leading industrial countries and by large current account imbalances contributed to the operational failure of the Werner Report. Yet, the Report provided valuable lessons for articulating conditions of a common currency area and for devising appropriate policies for its introduction as well as future sustainability.

Unlike the first attempt to introduce the European common currency, the second, more comprehensive program was in fact successful. It was based on the Delors Report that was formally adopted at the Madrid Summit in July 1989. Using the Delors Report as a guidepost, two intergovernmental conferences were convened to outline strategies for the creation of the economic and monetary union. The findings and policy suggestions of these conferences served as a basis for the Council meeting held in Maastricht at the end of 1991, which devised the Maastricht Treaty containing the criteria for fiscal and monetary convergence to the common currency. Eight years later, on January 4, 1999 the euro was smoothly introduced as a legal tender in 11 EU member countries, whose exchange rate were irrevocably frozen and national central banks ceded monetary policy-

making to the ECB. At the beginning of 2002, euro currency replaced national currencies cash balances. The euro-convergence process was successful for a number of reasons. Chief among them was compliance with the criteria for fiscal discipline (government budget deficits not exceeding 3 percent and the public debt lower than 60 percent of GDP). Equally important was the institutional leadership; the early unsuccessful exchange rate mechanism was lacking operational support of a single institution such as the ECB. In addition, the euro program was coherent and robust, contrasting the vagueness of the previous plans. Notably, the convergence to the euro was accompanied by the absence of capital controls that were eliminated within the participating member states as early as in 1990. In general terms, the replacement of highly autonomous monetary policies of national central banks with a single, cohesive policy of the ECB that was modeled on the Bundesbank policy helped infuse the essential foundational credibility to the newly formed monetary authority. As a result, the entire euro area has enjoyed a considerably lower inflation relative to the previous bothersome levels in the member states.

The interplay between systemic changes in monetary policies and inflation in Europe can be broadly examined on the basis of the data shown in Table 1. Generally speaking, over the past 50 years monetary authorities in Europe have actively responded to the recurrent inflationary developments. During the period immediately following the enactment of the Treaty of Rome in 1957, inflation seemed to be well-contained. The upper half of Table 1 shows the annual rates of CPI-based inflation in the largest EU economies (Germany, France, United Kingdom and Italy) as well as the average rates for the 15 EU Member States that comprised the Union prior to its 2004 enlargement. At the beginning of the European integration process in 1960 the inflation levels were generally low, but they pick up steam five years later (with the notable exception of France). The generally elevated inflation rates were attributable to more expansionary fiscal policies, as well as robust real GDP growth rates propelled by high domestic demand.   In contrast, the 1970s brought a very different story. Much elevated inflation rates, particularly in 1975 in the aftermath of the major worldwide oil crisis became a major concern for monetary policy-makers in Europe. Germany was more successful in controlling inflation than its major European counterparts, mainly because the Bundesbank adopted very restrictive monetary policy based on targeting growth rates of broad monetary aggregates. As mentioned above, the accelerated inflation trend in the 1970 destroyed the realization of the Werner Plan, causing deferment of the full-fledged monetary unification.

….. insert Table 1 around here …..

The second oil shock at the beginning of the 1980 did not help European countries resolve the perils of inflation. Recognizing the danger of inflation expectations, the European authorities established foundations for the second plan of monetary union the precepts of which were formalized by the Maastricht Treaty. The major efforts toward fiscal consolidation along with restrictive monetary policies were quite successful in laying favorable ground for a smooth process of monetary convergence. By the mid-1990s, EU countries regained effective control over inflation. Germany and France relied

on highly autonomous money targeting policies that helped contain nominal indexation thus also reduce the scope of inflation expectations. Eager to enter the EMU as one of its pioneer members, Italy had to undertake major efforts to reduce its humongous public debt that exceeded 100 percent of GDP at the beginning of the 1990s. Fiscal consolidation enabled the Bank of Italy to discontinue its traditional practice of generating seigniorage revenues for the budget, i.e. revenues from printing money. Such money creation was in fact a strong pro-inflationary factor in Italy before.

Since the inception of the euro in 1999, inflation in the EU has not been a major problem for policy-makers. Needless to say, the process of monetary and fiscal consolidation has played a pivotal role for achieving a satisfactory degree of price stability. As a result, inflation expectations and nominal indexation in the euro area are subdued, which results in expanded time horizon for investments due to lower financial risk. In response to lower inflation expectations, savings rates and productivity growth rates have been quite strong; they have helped restrain inflation further, although contributed to growing current account surpluses in the larger EU countries.

Disinflationary policies have not entailed excessive welfare costs – they have not contributed to economic recession in Europe. As shown in Table 2, growth rates among the leading four European economies back in 1990 were significantly asymmetric, with Germany growing at a much faster rate than the remaining three countries. Since 1995 the growth has been considerably more synchronized. All four countries experienced an accelerated growth around the year of 2000, followed by a near-zero slowdown in 2005, and a discernible pickup in 2006. Thus evidently, the inflation focusing conduct of monetary policy has not generated a detrimental effect on the real economy growth and, very likely, has laid solid foundation for a sustained long-term recovery accompanied by perceptible price stability.

….. insert Table 2 around here …..

Nevertheless, as underscored by the prevalent asymmetries discussed above, a 'full' monetary union is yet to be achieved in the EU. Unlike monetary policy that has been uniformly managed by the ECB in the euro area, fiscal policies have been conducted by national governments and not necessarily coordinated. It seems that at the present time competitive rather than synchronized fiscal policies prevail, as underscored by a fierce tax competition among the member countries. An effective coordination of fiscal policy is needed without delay in order to alleviate the existing asymmetries within the euro area, particularly given the perspective of future admission of new members

V. Cohesion of New Member States and Disinflation

The progress of NMS toward achieving price stability has been also quite remarkable. Without doubt, the price stability has been achieved through the efforts satisfying the requirements of disciplined fiscal and monetary policies incorporated in the EU accession programs. In contrast to the early reforms that were based on the original set of free-market precepts prescribed by the Washington Consensus, preparations for accession to

the European Union have been based on a much broader set of reforms encapsulated by the so-called Copenhagen Summit criteria.

These accession criteria were laid out by the European Council meeting in Copenhagen at the end of 1993. They are generalized within three main venues: political, economic and administrative. Specifically, the candidates are required to achieve a functioning democracy with universal voter franchise, the rule of law and the protection of human rights. On economic grounds, the candidates are expected to develop a functioning free market economy that would be capable of withstanding competition from foreign goods that are allowed free access to their markets. In addition, they need to show progress toward a sustainable macroeconomic stability along with the development of modern economic institutions. In administrative terms, each candidate needs to demonstrate that it is capable of transposing and administering the laws, directions and regulations of the EU, which comprise thirty different chapters of the *acquis communautaire*.

A visible progress toward disinflation and price stability is a logical outcome of increased competition, liberalization and privatization espoused by the accession criteria. Specifically, efforts toward increased competition, trade liberalization, disciplined fiscal and monetary policies and improved institutional efficiency all lead to a sustainable price stability. As shown in Table 1, the tasks of lowering inflation have been monumental, particularly for Poland and Hungary. Poland's comprehensive reform program enacted in the beginning of 1990 was based on a massive liberalization of previously regulated prices, with a simultaneous elimination of almost all barriers to trade. As a result of price liberalization, prices immediately jumped to domestic market equilibrium levels generating a 'corrective inflation' at the annual rate close to 600 percent. It has taken almost a decade to bring the Polish inflation down to single digit levels. The National Bank of Poland searched for an appropriate monetary policy to accomplish this task. First, it maintained a fixed exchange rate regime that was subsequently replaced with monetary base targeting and then interest rate targeting. But inflation was not decisively lowered until the NBP enacted DIT at the beginning of 1999. The Czech National Bank did not need to struggle with corrective inflation of a similar magnitude, although it faced difficulties to reduce it to less than 5 percent during the first seven years of the economic transformation, when monetary policy was based on a rigid currency peg. As in the case of Poland, inflation had begun to fall once the CNB enacted DIT in 1998. In a similar vein, the Hungarian fixed exchange rate regime (based on a crawling devaluation system) did not curtail inflation effectively. Hungary's inflation started to fall only after the National Bank of Hungary formally switched to DIT in May 2001 (and particularly after it abandoned the crawling devaluation scheme in October 2001)[4].

It is becoming apparent that the price stability in NMS contributes to economic growth since it lowers risk premia for investors, promotes growth of long-term consumer credit, thus consequently increases business fixed investment. The lagged, yet pronounced impact of monetary stability on real GDP growth rates in NMS is shown in

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[4] See Jonas and Mishkin (2005), Orlowski (2005a), Matoušek and Taci (2003), among others, for a more detailed examination of DIT regimes in NMS.

Table 2. At the beginning of economic transformation, these distorted, non-competitive economies were experiencing severe recessions. Yet since the mid-1990s, they have been continuously enjoying accelerated economic growth, which picked up steam in recent years, in the aftermath of the EU accession and the well-enrooted monetary and financial stability. The accelerated economic growth is an important factor generating more favorable conditions for the future adoption of the euro. Faster growth helps alleviate the problem of asymmetries within the future enlarged euro area, as it contributes to a lower ratio of public debt to GDP and reduces income per capita and wage differentials. It can be thus perceived as an important condition for the adoption of the euro – perhaps more relevant that the formal Maastricht convergence criteria (Kenen and Meade, 2003; De Grauwe, 2007). Arguably, a long-run success of the future enlargement of the euro area will depend on the degree of compliance with OCA precepts, particularly with the ability to reduce the scope of the existing economic and political asymmetries, and not on the strict adherence to the arbitrary set of the Maastricht criteria.

VI. Direct Inflation Targeting and Euro-Convergence of New EU Members

Devising optimal monetary policies that will guide NMS toward a smooth adoption of the euro is a complex task. There is no clear agreement on a uniform monetary policy in the literature addressing this subject. It seems that a fast-track approach calling for a speedy unilateral adoption of the euro advocated among others by Buiter and Grafe (2002) or Begg et. al, (2003) has little merit. Proposals for more gradual convergence policies seem to be now favored by both academic experts and policy makers. They range from monetary policy regimes based on flexible exchange rate targeting to fully autonomous policies based on flexible inflation targeting. There is, however, an agreement that the smaller NMS, such as the Baltic States, have made the right decision by choosing currency board arrangements based on fixed parity rates of their currencies to the euro, as an appropriate solution for their monetary convergence. This is a prudent choice, considering the fact that their sovereign bond markets are rather underdeveloped, thus experiencing excessive volatility. Such highly unstable markets are not capable of providing useful signals for conducting more autonomous and credible DIT policies, particularly those that are forward-looking, based on forecast variables.

There is a common caption in the literature that there is no 'one-size-fits-all' prescription for monetary policy on the passage toward the euro. Outside the concensus that on the eve of the euro adoption monetary autonomy of the candidates will have to be relinquished, the preceding policy solutions are subject to a sprawling debate. At least three policy proposals for the passage toward the euro can be extracted from the existing literature. The least autonomous variant of monetary policy that is based on flexible exchange rate targeting is advocated by Bofinger and Wollmershäuser (2001). More autonomous variants of flexible DIT include the 'dual target-single instrument' strategy examined by Jonas (2006), and the 'dual target-dual instrument' strategy proposed by Orlowski and Rybinski (2006).

The flexible exchange rate targeting approach assigns strong preference to the exchange rate stability target while downplaying instability of alternative goals such as

inflation or output gap. However, this policy variant implies a radical regime switch from DIT that is currently pursuit by the larger NMS to exchange rate stability. Its implementation necessitates frequent and costly foreign exchange market interventions, particularly during financial markets turbulance, or at any times when institutionally unprepared, underdeveloped markets are vulnerable to large nominal shocks. It also remains doubtful whether a monetary regime based on exchange rate stability (even in a stricter form than the one allowed by the ERM2) will in fact contribute to price stability, due to the unsteady exchange rate channel of monetary policy transmission, as shown empirically by Golinelli and Rovelli (2005), Kočenda and Valachy (2006) or Orlowski (2005a).

A more autonomous 'dual target – single instrument' strategy is an attractive although a bit implausible policy option. It is in essence an extension to the present DIT regimes that places an equal weight on the inflation and the exchange rate stability goals. However, both of them are implemented by using the interest rate (a central bank's reference rate) as a single instrument. This may entail a number of conflicts between these goals. For instance, large capital inflows may precipitate both excessive inflation and currency appreciation – the first one could be cured by raising, while the second one by lowering the interest rate.

To alleviate such 'traps' in policy instrumentalization, the 'dual target – dual instrument' variant introduces dichotomy between realization of the inflation target, managed by adjusting the interest rate, and realization of the exchange rate stability objective secured through foreign exchange market interventions. In a forward-looking policy scenario that is more applicable to the larger NMS, major deviations from (forecast-based) inflation targets are counteracted with changes in interest rates, while excessive volatility of the exchange rate is corrected with interventions. Moreover, as current interest rates in the euro-candidate countries still carry high *inflation risk premia*, any positive deviation of the inflation forecast from the target will have to be contained with a fairly large increase in interest rates. In contrast, a negative deviation does not need to be counreacted by a symmetric decrease in interest rates. In this sense, the upper and lower boundaries of the inflation target in the countries converging to the euro are inherently asymmetric (Orlowski, 1995a).

Considering the tasks of monetary convergence to the euro, strict DIT policies become seemingly irrelevant. Clearly, convergence necessitates supplementing the inflation target with an exchange rate stability objective, as policy-makers need to secure both price and exchange rate stability (Orlowski, 2007). Among the recent proposals for a DIT regime that entails convergence variables is the 'relative inflation forecast targeting' (RIFT) policy framework advanced by Orlowski (2005b, 2007). Stating briefly, RIFT is based on targeting the differentials between the forecasts for domestic and the euro are inflation rates. It also allows for mitigating potentially destabilizing shock to the exchange rate with market interventions. But in principle, RIFT assign priority to lowering inflation over reducing exchange rate volatility when possible conflicts between both policy objectives take place (such as in a case of unexpectedly large capital inflows).

The question arises whether the systemic changes in NMS follow the logic of flexible inflation targeting models that incorporate objectives of monetary convergence. As indicated in the preceding section, monetary authorities in the three largest NMS have chosen DIT as appropriate regimes for developing sustainable financial stability that is indispensable for convergence to the euro. The systemic evolution of their DIT policies is synthesized in Table 3.

….. insert Table 3 around here …..

The initial regimes were quite simple, i.e. based on year-end targets, set at ambitious levels and surrounded by narrow tolerance bands. Such straightforward specification was intended to underscore the policy-makers strong commitment to disinflation, particularly that actual inflation rates were still excessively high at that time. In the case of Poland, the ambitious original target was clearly missed in December 1999. Apparently, it took some time for DIT regimes to become credible, i.e. to align inflation expectations with the official target. Moreover, the reference interest rates were extremely high – all three central banks set them at double-digit levels. Correspondingly, long-term bond yields were also excessive, reflecting much elevated risk premia.

Once the foundations of monetary and financial stability have been in place, the DIT regimes have become more flexible and increasingly forward looking. The present policies are based on linear target trajectories for inflation with the midpoint satisfying the Maastricht inflation criterion (estimated to oscillate currently around 3.5 percent, or 1.5 percent above the average of the three lowest inflation rates among the EU 27 members). The actual realization of the inflation target in the Czech Republic and Poland is satisfactory, while in Hungary the recent fiscal instability imposes a large inflation risk premium elevating the CPI-based inflation to 8.8 percent on a year-on-year basis. The inflation targets in the first two countries are secured with the reference interest rates that are now below the target level for the U.S. federal funds rate and close to the ECB rates. Their bond yields also seem to satisfy the Maastricht long-term interest rate criterion. By these measures, Hungary remains to be an outlier in need of improving fiscal discipline and reinforcing the autonomy of the central bank. It is also worthy noting that all three central banks are highly transparent, their inflation forecasts or projections are clearly formulated and made available to the public at large (Jarmuzek, et. al, 2004). Inflation reports, press releases and official communications are regularly published; and the policy targets, indicator variables as well as operational procedures are continuously updated on the central banks websites.

Further improvements of monetary policies toward their greater clarity and predictability depend on the circumstances that are largely outside of central banks control. The three NMS governments will be well-advised to express more specific commitment to adopt the euro, with clearly stated deadlines and cohesive convergence policies that are thoroughly explained to the public at large. The experience of the initial euro area members in this respect may provide valuable lessons for the new euro candidates.

VII. Summary and Lessons for Future Monetary Policies in the European Union

The monetary integration in Europe has undergone a remarkable progress since the initiation of the economic and political unification by the Treaty of Rome fifty years ago. A major impetus to the monetary unification was the Delors Report of 1989 and the Maastricht Treaty of 1991 that provided lucid guidelines streamlining the process of monetary convergence to the common currency. The theories of optimum currency area advanced by Mundell (1961), Kenen (1969) and McKinnon (1962) provided valuable guidance for preparation of these documents and for outlining individual countries' convergence programs. In fact, over the years it has become apparent that the success of the European monetary unification depends on the ability to mitigate the prevalent economic and political asymmetries among the member countries. Convergence policies of the initial EMU members supported by the various programs of the European Commission have apparently focused on alleviating these discrepancies. But this task has not been fully completed yet.

The economic imbalances and asymmetric shocks are likely to intensify upon the future entry of NMS to the euro area. It is therefore imperative that the euro candidates enact and implement appropriate monetary, fiscal and institutional policies aimed at mitigating these disparities. With respect to monetary policies that are suitable for convergence to the euro, the larger NMS may benefit from modified DIT strategies that incorporate the main convergence tasks and objectives, including stability of the exchange rate. Strict DIT policies focusing exclusively on narrowly defined targets for domestic inflation are not conducive to monetary convergence. Forward-looking, flexible DIT strategies focusing on targeting the differential between the domestic and the euro area inflation forecasts offer a viable policy option for smooth convergence to the euro. It is equally imperative that the candidates undertake efforts aimed at reinforcing OCA criteria, i.e. favorable conditions for increasing labor mobility, trade openness, symmetric consumer preferences and political integration for a succession and for the future enlargement of the euro area.

On practical grounds, valuable information about dynamics of the prevalent asymmetries can be extracted from directional changes in spreads between yields on long-term sovereign bonds of the candidates and the euro area. In essence, the yield compression would indicate reduction of the asymmetries, at least those that are taken into consideration by the bond markets. It is not unreasonable to believe that these markets react to a wide-range of asymmetric shocks.

It shall be further noted that monetary authorities alone cannot pursue convergence programs and operational tasks. Political commitment of governments seeking social endorsement for a future monetary integration plays a pivotal role in this process. As De Grauwe (2007) points out, the continuing process of political unification is absolutely critical for avoiding fragility of the euro area and reducing the skepticism about its future viability.

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Table 1: Annual CPI-Based Inflation Rates in Europe

	1960	1965	1970	1975	1980	1985	1990	1995	2000	2005
Germany	1.5	3.2	3.4	5.9	5.4	2.2	2.7	1.7	1.9	2.0
France	4.1	2.7	5.8	11.7	13.5	5.8	3.4	1.8	1.7	1.8
UK	1.0	4.8	6.4	24.2	18.0	6.1	9.5	3.4	2.9	2.1
Italy	1.4	4.4	4.8	16.9	21.3	9.2	6.5	5.2	2.5	2.0
EU15avg	2.0	5.0	5.0	14.2	13.6	7.5	6.8	3.1	3.4	2.6
Poland	-	-	-	-	-	-	585.8	27.9	10.1	2.1
Czech R.	-	-	-	-	-	-	9.5	9.2	3.8	1.8
Hungary	-	-	-	-	-	-	29.0	28.3	9.8	3.6

Data Source: International Monetary Fund: International Financial Statistics and World Economic Outlook Tables Database (May 2007).

Table 2: Real GDP Growth Rates.

	1990	1995	2000	2005	2006
Germany	+5.7	+1.9	+3.1	+0.9	+2.7
France	+2.7	+1.8	+4.0	+1.2	+2.0
UK	+0.1	+2.9	+3.8	+1.9	+2.7
Italy	+2.1	+2.8	+3.6	+0.1	+1.9
Poland	-7.2	+6.8	+4.2	+3.5	+5.8
Czech R.	-1.2	+6.4	+3.9	+6.1	+6.1
Hungary	-3.5	+3.5	+5.2	+4.2	+3.9

Data Source: International Monetary Fund: World Economic Outlook Tables Database (May 2007).

Table 3: Systemic evolution of inflation targeting in NMS.

	Czech Republic	**Poland**	**Hungary**
DIT inception date	January 1998	January 1999	June 2001
Type of DIT: Initial Present	 strict flexible	 strict strict	 flexible flexible
Target specification: Initial Present	 Net infl., year-end CPI, flat linear trajectory (as of 2006)	 CPI, year-end CPI, flat linear trajectory (as of 2004)	 CPI, year-end CPI, flat trajectory (as of 2007)
Intermediate target level: Initial year Present (May 2007)	 5.5-6.5% (Dec.1998) 3.0% , no band	 6.6-7.8 (Dec. 1999) 2.5%, +/- 1% band	 6.0-8.0% (Dec.2001) 3.5%, +/- 1% band
Actual realization: Initial year Present (April 2007)	 1.7% net, 6.8% CPI (Dec. 1998) 2.5%	 9.8% (Dec. 1999) 2.3%	 6.8% (Dec. 2001) 8.8%
Corresponding exchange rate regime: Initial Present	 pure float managed float	 crawling (wide) band pure float, as of April00	 crawling peg ERM2 shadowing
Corresponding central bank reference interest rate: Initial Present (May 2007)	 14.75% (Jan. 1998) 2.75%	 13.0% (Jan. 1999) 4.25%	 11.0% (June 2001) 8.00%
Ten-year Treasury bond yield (month average): December 2000 May 2007	 7.38% 4.21%	 11.37% 5.25%	 8.00% 6.53%
Target announcements	CNB Board in consultation with MF	NBP Monetary Policy Council	H. Government and NBH Board
Forward-looking mechanism	Inflation forecasts revised monthly	Inflation "projection"	Rolling inflation forecasts for six quarters ahead
Inflation reports	Annual, quarterly	Annual, quarterly	Annual, quarterly
Official euro adoption	Convergence program, no date	Convergence program, no date	Convergence program, no date

Source: author's own compilation based on CNB, NBP and NBH reports and data.