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Something unforeseeable happened? Natural rate theory and economic crisis

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“Natural rate theory” – the application of the efficient market hypothesis to labour markets – has guided economic policy since the 1970s and laid the foundations for the design of major European institutions in the 1990s. Unfettered markets were declared to be stable, and consequently public policies and regulations were regarded as distortions. This led to a division of labour in which central banks were responsible only for price stability, governments for labour market reforms and unions for low wages. The European discussion focused almost exclusively on labour market reforms to reduce unemployment. Against the background of the recent dramatic drop in economic activity, this paper confronts natural rate theory with actual economic trends and argues that the predictions of the theory hardly fit the facts.

Yet in 2009, GDP fell by about 2.5% in the USA and France, around 5% in Germany and Japan, and more than 4% in the euro area. This was the largest drop in economic activity since the Great Depression. Central banks responded with “unconventional measures” and governments reacted with expansionary fiscal policy, although such macroeconomic policies were declared dead not long ago. Keynes, not Lucas or Friedman, seemed to guide economic policy in the crisis. There are some signs of hope in 2010, but GDP growth is still unsatisfactory for a recovery from such a big drop in economic activity. Nevertheless, some analysts declare the recession to be over, spread fears of upcoming inflation caused by too much liquidity, and declare public deficits the major problem, leading them to call for fiscal consolidation and a return to “conventional” monetary policy. Natural rate theory is returning. But rising public debt is mainly the result of the current crisis – of the enormous financial infusions to the almost-collapsed financial system and deficit spending that was necessary to substitute for diminishing private expenditures – rather than being caused by excessive spending on education, public infrastructure and the like. The current public deficits are unsustainable and need to be reduced, but is cutting public expenditures the right measure, or do we need more expansionary measures to stimulate economic activity to raise revenues? Germany is currently (in August 2010) enjoying an export-driven boom and advocates of deflationary policy propose export surpluses, budget constraints and tight monetary policy as a remedy for all countries. However, even though Germany may presently look like the champion, long-run net export surpluses are as much part of the international imbalances as long-run net export deficits.

In any case, it is hard to reconcile the enormous drop in economic activity with efficient markets always getting prices right and being in equilibrium because rational economic agents foresee economic trends unless something unforeseeable happens.

namely the bankruptcy of Lehman Brothers, is the fallback position of EMH proponents. Robert Lucas, in his defence of the EMH, denies that anybody could have foreseen this bankruptcy. But Lucas seems to confuse cause and effect. The Lehman bankruptcy evidently sent shockwaves through financial markets, but the bankruptcy was the consequence of drastically overvalued assets of malfunctioning deregulated financial markets which got prices fundamentally wrong.

Without a doubt, there were critics of these foundations within economics, but as Paul Krugman summarises, the “natural rate theorists” (mainly in Chicago and the Midwest, i.e. “freshwater”) dismissed their critics (mainly at the coasts, i.e. “salt water”) as unscientific, intellectually dishonest or simply not smart enough to understand the EMH. Most policy institutions bought into the fashionable “new rate models”; the OECD’s Jobs Study, the IMF, and especially the EU institutions were designed according to the “natural rate” doctrine. Yet actually, “natural rate models” – based on artificial micro-foundations – did not have much evidence to support their theory; strong assumptions were all that made it a coherent model. Nevertheless, as macroeconomic policy had been declared irrelevant or even potentially the cause of business cycles, macroeconomic reasons for European unemployment were not seriously investigated and the emphasis was almost entirely on labour market institutions. However, the differences between monetary policy institutions in the USA and Europe are as substantial as those in labour markets.

Why did so many economists and politicians follow the prediction of highly idealised theories based on perfect, stable markets? “Theoretical rigour” and “micro-foundations” – i.e. super rationality, maximising behaviour, representative agents – were claimed by “natural rate theorists” to be necessary ingredients of economic models, but actually the evidence in favour of “natural rate theory” was shaky at best. Nevertheless, radical ideas deduced from assumptions of efficiently operating markets unfortunately did not remain what they actually were, results of an extremely idealised theoretical model; rather, they became a general guideline for economic policy, first affecting radical conservatives like America’s Ronald Reagan and Britain’s Margaret Thatcher, but later becoming “common sense”. The benchmark model to evaluate real-world institutions was the perfect market:

\[ P \approx M \]

The major principles derived from natural rate theory that were guiding economic policy are: a) markets are efficient (and therefore, the private sector outperforms the public sector), b) monetary policy is neutral to the real economy, and fiscal policy (deficit spending) is ineffective because rational citizens expect public deficits to be future tax increases (so-called Ricardian equivalence). In other words: policies other than those influencing the incentive structure of the economy were assumed to be ineffective or impedimental – and this was an assumption, not evidence-based. After all, if the economy is assumed to be in equilibrium or to return to equilibrium quickly, reasons for persisting unemployment can only be sought in institutional rigidities. Natural rate theory excluded monetary and fiscal policy as feasible policy options and introduced a new division of labour: central banks were responsible for price stability only, governments for (de-)regulation and unions for (low) wages. It was central bankers’ heaven: tight monetary policy could only result in low inflation, as negative effects on growth and employment were excluded (by assumption).

This paper argues that deflationary policies slowed recoveries and led to high and persisting unemployment in Europe. In contrast, the enormous employment growth in the USA was mainly the result of strong recoveries. Differences in macroeconomic institutions – largely neglected in the European discussion – are the key to understanding diverging EU-US employment trends. EU institutions – designed in the heyday of natural rate theory – are overly restrictive and
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Analysis with Blinds: Labour Market Institutions Only

In the 1960s, Americans looked to Europe and were fascinated by the extremely low unemployment rates (less than 1% in Germany). With the first oil price shocks in the 1970s, unemployment rates in Europe started to rise and persisted at ever higher levels after every recession (see the upper diagram of Figure 1). In contrast, US unemployment – although higher at the beginning – returned to its pre-recession levels. Furthermore, employment (measured in hours or in persons) rose in the USA but stagnated in Europe (Figure 1, lower diagram). Why did employment fail to recover after recessions in Europe but not in the USA?

If seen without blinds, the cause of the different EU-US trends may be sought in diverging macroeconomic policies and/or distortions in the functioning of labour markets. Yet natural rate theory excluded macroeconomic policies as potential causes of persisting unemployment and focused entirely on labour market institutions, which determine the “natural rates.”\(^8\) Sure, institutional differences like unemployment benefits, unions, employment protection laws and a more compressed wage structure (to name the favourite “suspects”) may potentially disturb the functioning of labour markets, but they may also improve it.\(^9\) Natural rate theory predicts that economies return quickly to the unique equilibrium determined by the incentive structure. But how could rising unemployment rates in Europe, persisting at ever higher levels, be consistent with natural rate theory? Obviously, if welfare states become more generous, they change the incentive structure and thus the “natural rates” of unemployment. But European welfare states did not become more generous in recessions, they did not prolong unemployment benefits in the recession (a measure often used in the USA), they did not ease eligibility requirements for unemployment benefits and so on. On the contrary, unemployment benefits were reduced, eligibility became stricter, union power declined, employment protection laws were relaxed and wage dispersion widened; thus reforms in most European countries should have lowered rather than raised unemployment rates according to natural rate theory.

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theory.10 Empirical evidence for Germany in comparison to the USA does not seem to support the labour market rigidity hypothesis.11

Natural rate theory put blin ds on the eyes of analy st s and upward-jumping “natural rates” became the dominant explanation for Europe’s employment problem. “This remarkable theory was accepted without a qualm.”12 The theory was taken so literally that anecdotal evidence was considered sufficient and serious empirical studies were ignored. Less regulated labour markets and enormous employment growth in the USA were, through the lens of natural rate theory, regarded as sufficient evidence that the deregulation of European welfare state institutions could ignite a “great job machine” in Europe. Although cross-country comparisons of Europe and the USA fit the pattern, international comparative microeconomic studies, which take developments within countries into account, do not support the “institutional” story. Surprisingly little attention was given to macroeconomic institutions, although substantial differences between the USA and Europe exist here which could have been used to investigate differences in employment performance.

10 Some countries were picked to celebrate the claimed effects of structural reforms: The Netherlands (see also below), Denmark, Ireland. For an analysis see D. Howell, op. cit.


14 OECD: Jobs Study, Paris 1994, OECD.


Deeply rooted in natural rate theory, the political response was that what was needed were labour market reforms, labour market reforms and labour market reforms. If one excludes all other reasons for unemployment by assumption, only distortions of the market mechanism are left – thus completing the circle.13 The OECD’s Jobs Study14 was clearly based on natural rate theory, favouring the Anglo-Saxon model of less regulated labour markets. Yet within the OECD, it did not go unrecognised that some countries with drastically different institutions performed similarly well with respect to unemployment and participation rates but better with respect to inequality.15 Therefore, the revision of the Jobs Study in 200418 was much more reluctant and modest with its conclusions and admitted that different institutional arrangements may lead to similar outcomes.

Analysis Without Blinds: Monetary Policy

The division of labour implied by the natural rate theory assigned monetary policy the sole task of maintaining low inflation. Monetary policy was again declared to be neutral and to have no affect on the real economy, i.e. it was assumed that high price stability did not compete with growth; on the contrary, high price stability was said to be the precondition for economic growth. In the words of central bankers: “Other than by maintaining price stability and thereby reaping its benefits in terms of economic performance there is no trade-off at longer horizons between inflation, on the one hand, and economic growth or employment, on the other hand, that can be exploited by monetary policy makers.”17 The economic policy message loudly trumpeted and widely heard was that to reduce unemployment, structural reforms were needed. According to this widely accepted view, monetary policy can influence real economic activity in the short run but it is neutral in the long run, i.e. it does not affect the path. “Potential-oriented”18 monetary policy will reduce the fluctuations around the trend but not the trend itself, as illustrated in Figure 2 (upper diagram). The amplitudes around a linear
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est rates and demand expectations. If monetary policy can influence these variables, it does not leave the production potential unaffected. In other words: the long run depends on present activities, or “short runs”. Neutrality of monetary policy with regard to real economic activity is a theoretical construct based on strong but implausible assumptions. If the economy is assumed to be independent of present economic activity, if the production potential is assumed to independent of present economic activity – or similarly the growth trend to be unaffected by present economic activity – then only structural reforms can improve it. With respect to monetary policy, inflation will always be a monetary phenomenon.

It is surely one of the curiosities in economics that the neutrality view of monetary policy regained its dominance when central banks became powerful. Under the Bretton Woods fixed exchange rate system, the options of even independent central banks like the Bundesbank were limited because they had to adjust their policies to maintain the exchange rates set by the governments. Only after the collapse of the Bretton Woods system and the shift to flexible exchange rates in 1973 did independent central banks become major players in economic policy. The Bundesbank used its post-Bretton Woods freedom and decided to target price stability. Over time, the Bundesbank set increasingly ambitious inflation targets from 4.5% in the 1970s to 1.5% shortly before the introduction of the euro, preparing the ground for the ECB target of less than 2% inflation. Following this policy of price stability, the Bundesbank became “The Bank that Rules Europe”, the bank became Europe’s de facto central bank, which was reflected in the self-perception of the Bundesbank.

Again, the evidence – theoretically and empirically – for the “neutrality of money” hypothesis is not as clear as some central bankers pushing for tight monetary policy want us to believe. The outcry of some German economists in response to Paul Krugman’s recent warning that the ECB’s overly tight monetary policy will lower economic growth and raise unemployment may be taken as support for the deep ideology behind this issue. Is potential output (the growth path) actually independent of present activities? Is the long run independent of the short run? Surely, potential output is influenced by investment, which may very well react to interest rates and demand expectations. If monetary policy can influence these variables, it does not leave the production potential unaffected. In other words: the long run depends on present activities, or “short runs”. Neutrality of monetary policy with regard to real economic activity is a theoretical construct based on strong but implausible assumptions. If the economy is assumed to be independent of present economic activity, if the production potential is assumed to independent of present economic activity – or similarly the growth trend to be unaffected by present economic activity – then only structural reforms can improve it. With respect to monetary policy, inflation will always be a monetary phenomenon.

19 Also, consumption may react directly to interest rates or indirectly due to expected employment prospects.
23 Formally the Bundesbank targeted the growth of monetary aggregates which can arguably be interpreted as inflation targeting, in the sense that "the Bundesbank’s money growth targets are derived, using the quantity equation, to be consistent with an annual inflation target, given projections of the growth of potential output and of possible changes in the velocity of money." (B. Bernanke, F. Mishkin: Inflation Targeting: A New Framework for Monetary Policy?, in: Journal of Economic Perspectives, No. 11, 1997, pp. 97-115).
desbank. Some countries pegged their currencies directly to the D-Mark (Austria, The Netherlands) and others were influenced by Bundesbank policies through the European Exchange Rate Mechanism. Therefore, the establishment influenced by Bundesbank policies through the European to the D-Mark (Austria, The Netherlands) and others were regain influence on monetary policy. The Bundesbank’s success with respect to price stability was the basis of the widely celebrated “Bundesbank legend”, and if it were true that monetary policy did not affect the real economy, if it did not affect growth, a policy of high price stability would have been costless. But again, the evidence – theoretical and empirical – is not as clear as some central bankers seem to believe. Actually, the German – and the European – economy paid a high price for low inflation in terms of underperformance with respect to economic growth and employment.

How do we evaluate a high degree of price stability if monetary policy is not neutral? Once one accepts that monetary policy has real effects – if only in the short run – it becomes clear that a restrictive monetary policy reduces growth and will not allow the economy to return to its initial growth path, especially if the policy is asymmetrically guided by fears that expansionary periods create price pressure, but pays only marginal attention to unused capacity. Furthermore, if investment depends on expected demand, as many studies indicate, an asymmetric monetary policy will reduce investment and thus potential output. Hysteresis in labour markets may cause similar effects with respect to labour inputs. For unemployment rates to return to pre-recession levels, strong economic growth is needed in the upswing, substantially above the growth of potential output and productivity growth. If growth remains at or below this rate, employment will not recover and unemployment will persist.

The rise in European unemployment could thus result from asymmetric monetary policy, which slows recoveries but which does not (fully) counteract recessions (Figure 2, lower diagram): starting with a negative external shock which pushes the economy into a recession not counteracted by monetary policy (1), the recovery is not fully accommodated because the central bank fears upcoming inflationary pressure, i.e. the economy remains below the potential predicted in the boom but also on average over the business cycle; as a result the economy will remain below the initial growth path when it swings back (2). With the next downswing, the process will be repeated (3). Consequently, asymmetric monetary policy will lower the long-run growth trend (4). The short run affects the long run, and monetary policy affects the growth potential. Consequently, employment will not reach its former level. All the ingredients needed to establish such a scenario are negative demand shocks and asymmetric policy reaction functions of central banks.

The cumulated employment effective growth rates of four business cycles from the 1970s to the 2000s in Germany and France (which may represent Continental Europe) and the USA are displayed in Figure 1 (middle diagram). Clearly, the US employment “miracle” is the result of economic growth substantially overshooting productivity growth in recoveries; meanwhile, European employment hardly recovered after recessions, and thus unemployment persisted at ever higher levels after every recession. More expansionary policies in Europe would have allowed for higher participation (e.g. less early retirement, higher female labour force participation). Even some working hours reductions, which were introduced in the 1980s and were motivated by employment considerations, would likely have been unnecessary. Europe clearly had much more room for economic expansion in recoveries but was slowed by the overly restrictive, asymmetric monetary policy of the Bundesbank. Analysis by Schettkat and Sun shows that the Bundesbank’s fear of inflation led to an asymmetric monetary policy. When actual output was above potential output, the Bundesbank acted cautiously, deviating from its long-run orientation and raising the interest rate. When actual output was below potential output, the Bundesbank kept its long-run orientation and did not lower the interest rate accordingly. Therefore, the Bundesbank slowed economic expansions. In contrast, when the output gap was negative, the Bundesbank did not reduce the interest rate significantly, i.e. it did not (fully) counter recessions.

Estimates of potential output influence policy, and underestimating potential output may, for example, lead to a budget deficit identified as structural when in fact it may not be. This may lead to an overly restrictive monetary policy because an underestimated potential feeds the fear of price pressure. The output gap difference between estimates of the potential using different methods can be as large as six percentage points. For example, in the mid-1980s some methods

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25 “Stable Money for Germany and Europe, 50 years of the Deutsche Bundesbank” (Deutsche Bundesbank 2008, http://www.bundesbank.de/50jahre/50jahre.en.php) clearly indicates the self-perception and dominant role of the Bundesbank in Europe and the fact that the bank served as a blueprint for the ECB.
26 E. Baltensperger, op. cit.
29 R. Schettkat, R. Sun: Monetary Policy and European Unemployment, op. cit.
30 Deutsche Bundesbank: Zur Entwicklung des Produktionspotenzials in Deutschland, Deutsche Bundesbank Monatsbericht, March 2003, pp. 43-54.
suggested overutilisation of capacity while others predicted severe underutilisation, i.e. the upper bound estimates would already make central bankers nervous, whereas the lower estimates would probably keep them more relaxed. Thus, being cautious regarding such estimates may turn out to be very beneficial.\textsuperscript{31}

The Bundesbank’s own estimates of Germany’s production potential suggest that the German economy was severely underutilising its capacity in recoveries (Figure 3). If these Bundesbank estimates are close to the true potential, underutilisation of capacity was around 3\% throughout the 1980s. Even in the upswing after 1984, the underutilisation of the potential continued. On the other hand, overutilisation was rare, and even in the unification boom 1990/1991, actual production was only 2 or 3\% above the potential. Given these figures, it does not come as a surprise that the Bundesbank achieved its increasingly ambitious price stability goals,\textsuperscript{32} with actual inflation rates declining from 5.6\% in 1975 to less than 1\% in 1998. But underused capacity represents a loss of production, an economy living below its possibilities and a greater sacrifice of living standards than necessary. Thus, the costs of high price stability – if it was at all endangered – were lower incomes, higher unemployment and additional stress on the welfare state. Monetary policy geared to price stability was not a “free lunch” – it was enormously costly.

Post-recession Europe may end up in a “lost decade” on a permanently lower growth path, warned European Commission President José Manuel Barroso\textsuperscript{33} at the meeting of the Heads of State and Government on February 11, 2010. To bring Europe onto a higher growth path, it needs a “strong recovery” to accelerate growth. How can economic growth be accelerated? Are European institutions geared to support growth?

**European Macroeconomic Institutions in “Natural Rate Spirit”**

The ambitious employment targets\textsuperscript{34} of the so-called Lisbon Agenda (2000) were somewhat lowered\textsuperscript{35} in the “re-launch” of the agenda in 2005, but initially the Lisbon Agenda aimed at making the EU the most dynamic competitive knowledge-based economic area in the world. But national governments could not agree on binding policies to achieve these targets, and instead every country proceeded at its discretion (“open method of coordination”). It is arguably the dilemma of the EU that binding procedures were established to maintain price stability and curb public deficits, but that “open methods” need to be applied whenever positive action is required. Although the Commission puts the achievements of the Lisbon Strategy in a shiny light (“missing the target does not mean that the Lisbon strategy failed”), it is pretty clear that the major ingredients of a “dynamic knowledge-based economy”, namely educational investments, have been missing in many of the EU countries. OECD statistics\textsuperscript{36} show that with the exception of Sweden, Norway, Denmark and Austria, all EU countries spend less per student than the OECD average. This is hardly the right move to achieve the Lisbon goals.

Institutions designed according to natural rate theory neglected the impact of restrictive macroeconomic policy. “With regard to the macro-economic context, it is essential for the Union to pursue a policy of growth geared to stability, sound public finances, pay restraint and structural reform.”\textsuperscript{37} “Stability” meant price stability, “sound public finances” meant low public budgets, “pay restraint” meant low wage growth, and “structural reforms” meant a withdrawal of welfare state institutions. A tight monetary policy focusing on price stability was seen as the final seal: “…the introduction of the euro as from 1 January 1999, which will set the final

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\textsuperscript{32}R. Schettkat, R. Sun: Monetary Policy and European Unemployment, op. cit.

\textsuperscript{33}J.M. Barroso: Presentation to the Informal European Council, 11 February 2010.

\textsuperscript{34}For the 15 to 65 year-old population, an overall employment rate of 70\%, and for the female population, an employment rate of 60\% should have been reached by 2010.

\textsuperscript{35}Now rates of 67\% for overall employment and 57\% for female employment were envisaged. In addition, the employment rate of older workers (55-65 years) was to rise to 53\% by 2010.

\textsuperscript{36}OECD: Education at a glance, Paris 2008.


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**Figure 3**

*Output Gaps in Germany over Three Business Cycles*

*Source: based on Deutsche Bundesbank: Zur Entwicklung des Produktionspotenzials in Deutschland, Deutsche Bundesbank Monatsbericht, March 2003, pp. 43-54.*

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However, with Germany’s deflationary policy, net export surpluses were the major force behind the German recovery of the mid-2000s, as is the case in 2010. Germany, the largest economy in Euroland, followed the deflationary strategy used by the Dutch when the Nederlandse Bank pegged the guilder to the German Mark and began heeding Bundesbank decisions. Since wages and prices grew at a lower rate in the Netherlands than in Germany, the real exchange rate was declining and Dutch products gained price competitiveness, clearly visible in the Dutch net export surpluses. If a small economy like the Netherlands boosts its net exports through improved price competitiveness achieved via deflationary policies, it affects Euroland only marginally, though it has a huge effect on the Dutch economy because foreign trade plays an important part in a small economy.

Net export surpluses may help to reduce foreign debt, but continuous surpluses distort the balance and leave the surplus country to live below its potential because domestic demand is slowed. Raising domestic demand – private and public – in surplus countries would raise living standards there and would bring imports and exports into balance; it would also allow for balanced growth in the European Union. In a currency union where “nominal exchange rates” cannot compensate for imbalances, it is dangerous when the major player follows a deflationary, net export surplus policy and in addition bars the public use of private savings, as the “Schuldenbremse” (balanced budget constraint) in Germany does. This creates a race to the bottom and a deflationary bias, slowing growth in Euroland and reducing potential living standards. The low-inflation, export-surplus country looks like the champion, but it is as much a part of the problem of European and international divergence as the high-inflation, export-deficit country. The one cannot exist without the other.

To sustain the progress in European integration, the currency union needs to be complemented by political union. The European level needs to become a serious economic policy player to prevent the permanent danger of deflation. European policies were supply-side oriented, which helps to improve the potential, but the potential must also be used. A policy of improving the supply side is not identical with low taxes and the smallest possible public sector. It is about the development of markets, not about the allocation of given resources, which natural rate theory emphasises. In any case, to compensate for the bias of European institutions towards low growth requires overcoming the division between fiscal, monetary and wage policies. These are not independent but highly interdependent and have strong macroeconomic impacts. They need to be integrated within a European coordination process. Political union is required to make the remarkable progress of European integration sustainable. Just a currency union with a strong central bank facing governments representing national interests seems neither suitable nor sustainable. The greatest danger for Europe's employment future stems from premature consolidation of public budgets. If governments and central banks fear inflationary pressure and raise interest rates or consolidate public budgets too early, the recovery will slow and unemployment will remain at high levels.

Governments and central banks learned a lot from policy mistakes made in the Great Depression and saved us from a similar experience. Hopefully they also understand that it will take substantial economic growth for a long period – a New Deal for Europe – to return to pre-recession employment levels. Tightening monetary policy and consolidating public budgets too early would be extremely costly for Europe and may end in a “lost decade”.

38 Ibid, #11.
39 Ibid, #12.
41 It was popular to ascribe the Dutch employment success to structural reforms (e.g. A. Heme r i j k , J. V is s e r : A Dutch Miracle: Job Growth, Welfare Reform and Corporatism in the Netherlands, Amsterdam 1997, Amsterdam University Press), but actually it was based on a macroeconomic strategy (R. Scherttkat: Is Labor Market Regulation at the Root of European Unemployment? The Case of Germany and the Netherlands, in: D. Howell (ed.) : Fighting Unemployment, Oxford 2005, Oxford University Press, pp. 262-283).
44 Germany is insisting on “natural rate” policies, recently introducing a “balanced budget constraint” to the German constitution (Grundgesetze) limiting public deficits to 0.35% of GDP.