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**Fiscal deficits in the U.S. and Europe:
Revisiting the link with interest rates**

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1. Introduction

There is remarkable confusion in the debate over the value and effectiveness of budget and tax policies, especially when one broadens the view to both sides of the Atlantic. In the U.S., fiscal policy played an important role in countering the effects of the 2001-02 recession, while very little fiscal management has been possible in the countries that belong to the Euro area, where rigid bounds regulate the national fiscal stance. The record shows that the Euro area as a whole has failed to generate rates of growth comparable to those achieved by the U.S. Indeed, there is a stark contrast between the counter-cyclical and more flexible fiscal (and monetary) policies in the U.S. and the rule-based fiscal (and monetary) policies in the

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Euro area.¹ While the U.S. administration views a tax-cut-induced federal deficit as a means to stimulate growth, the European (Brussels-Frankfurt) economic policy consensus is that priority in fiscal decisions should be given to meeting discipline objectives.

The European approach to fiscal management has been criticized for being too rigidly constrained by discipline rules, and for lacking a system-wide budgetary policy capable of offsetting a drop in aggregate demand or responding to cyclical fluctuations. Fiscal management in Europe is unique in its structure: while all countries are subject to the rules of the Stability and Growth Pact (SGP) over deficit size, it remains the responsibility of individual countries, and there is no equivalent of a “federal” budget. Among the critics, De Grauwe (2006) has claimed that “the absence of a central budget in the Eurozone implies that no budgetary policy aimed at stabilizing the business cycle in the union is available.” And Goodhart (2007) has argued in favor of “some, relatively small, shift of competences from the individual nation states to a, somewhat enlarged, federal budget in Brussels.” While some Europeans seem willing to consider the benefits of a U.S.-type policy approach, prominent economists in the U.S. have criticized U.S. fiscal management and expressed concerns about the size of government deficits and the escalation of public debt under the current Administration. Rubin, Orszag and Sinai (2004), for example, urge fiscal discipline in the U.S. through a combination of tax increases and spending cuts. They warn that

¹ For an analysis of the impact of fiscal policy in the euro area in comparison to US fiscal policy see Hein and Truger (2007). Regarding monetary policy, while the Fed pursues both a growth and a price stability goal, the European Central Bank exclusively aims at a quantitatively defined price stability target.

continuous deficits will generate rising interest rates and economic stagnation.

These developments leave open a number of important strategic questions in the U.S. and Europe: Should European institutions change their view, discard deficit rules that forbid deficits in excess of 3% of GDP, and allow fiscal policy to respond more flexibly to cyclical downturns? Or should the U.S. Administration follow the Euro area model and accept a greater commitment to fiscal discipline by taking prompt action to cut spending or raise taxes when a deficit becomes “excessive”? Ultimately, the dilemma is an old and well-known one: whether fiscal policy should be restrained by self-imposed rules or should be actively used as a means to accomplish economic stability and growth.

Judging from average growth rates, flexibility in U.S. policy making seems to pay off compared to the Euro area stance. The question of the impact of fiscal policy on aggregate demand and supply goes beyond the scope of this paper,² except for one important matter on which there is a considerable difference of opinion, namely the impact of fiscal deficits on interest rates. Indeed, one major justification for fiscal provisions aimed at restricting the size of public deficits is the notion that larger deficits result in higher interest rates and thus slower economic growth. This is a highly controversial statement: theoretically, it only holds under special conditions; empirically, the evidence is more ambiguous than claimed by its advocates.

This Working Paper reviews both the empirical evidence and the theory on the

² For a more lengthy discussion of the role of demand-management policies in the euro area as well as in comparison with the US, see Bibow and Terzi (2007).

relationship between public deficits and interest rates, with reference to both the U.S. and Europe. Section 2 considers the sharp fluctuations in the U.S. fiscal stance since 1992 and compares U.S. interest rate performance with that in the Euro area over its eight-year fiscal policy experiment. In Section 3, I review other empirical studies of the relationship between fiscal policy and interest rates. Section 4 outlines a convenient conceptual framework for studying the relationship between interest rates and the fiscal budget, and Section 5 concludes with some policy implications.

2. BUDGET “SURPRISES” AND INTEREST RATES: A NATURAL EXPERIMENT IN THE U.S.

The primary aim of this section is to explore what happened during a 15-year period when the U.S. federal budget underwent a considerable swing between “large” deficits and “large” surpluses. In 1992 the deficit peaked at 4.7% of GDP following a decade (1983-92) when the average size of the deficit had been 4.3%. Concerns about “national solvency” and calls for “fiscal discipline” were common. After 1992, there was a steady decline in the deficit, turning into a record surplus of 2.4% in 2000. This was the largest surplus/GDP ratio since 1948.

Then, after eight straight years of fiscal “improvement”, the surplus began to fade and, by 2004, the U.S. federal accounts had plunged to a deficit of 3.6% of GDP, not far from the 1992 figure. This turnaround was equally unexpected: readers may recall that during the surplus years (1998-2001), a common concern of financial investors and economists was that if the U.S. Treasury had continued to run surpluses, it would eventually fully repay its debt, and benchmark securities would disappear from investors’ portfolios. The budgetary reversal of the Federal accounts as a percentage of GDP was of the magnitude of six percentage points in only four years. A reversal of such magnitude had never been observed in the post World War II era except during the 1948-49 recession, when the budget balance declined by 5.7 percentage points in three years (1948-50).

This historic reversal in the U.S. fiscal stance provides something close to a “natural experiment.” Strictly speaking, a natural experiment is where a significant change occurs in one aspect of the economy and economists can study the effects of that change assuming that other exogenous variables are constant. Although no one would argue that the 1992-2005 fiscal episode was a true natural experiment, the extent of the fiscal turnaround was the largest since 1950. In addition, the “surprise” element of both the “improvement” and subsequent “deterioration” indicates that the effects were generally not predicted, as official projections were regularly off the mark. This surprise element means that expectations of budget swings have likely changed quickly, rather than gradually, and any alleged impact of a change in the expected deficit size on interest rates should have been clearly detectable. In

addition, foreign financial inflows were steadily growing (the flip side of the steadily worsening U.S. current account), and any alleged effect on interest rates would likely be uniform throughout the time period. In sum, if the hypothesis that deficits increase interest rates had some value, one should have observed at least some evidence of an impact on interest rates of such considerable 1992-2005 budget reversals and the associated sweeping revisions of expected federal deficits.

Figure 1 shows the fiscal balance as a share of GDP, and the 10-year benchmark bond yields, both nominal and real, from 1992 to 2006. During the upswing in the fiscal stance, one observes a vague downward trend of nominal rates: the fact the Treasury yields in 2000 were 16 basis points higher than in 1993, however, brings little comfort to the idea that interest rates have declined with a robustly shrinking deficit. “Real” rates (i.e., nominal rates deflated using 10-year inflation forecasts provided by the Survey of Professional Forecasters) follow an even shallower trend, and the deflated rate at the peak of the surplus (2000) was 36 basis points higher than in 1993. In the period after 2000, when fiscal balances and fiscal projections were deteriorating surprisingly quickly, nominal rates have continued their downward trend, and at an accelerated pace: when the federal deficit reached the 2004 trough, nominal rates were 176 basis points lower than when the surplus had peaked. Interest rates deflated with expected inflation also fell by 144 basis points.

[Figure 1]

The claim that an increasing size of the fiscal deficit causes higher interest rates can hardly

be backed by this set of data. Even the most recent developments (with a decline of the deficit/GDP ratio to 2.6% in 2006, a figure that is lower than every single fiscal year in the 1982-1994 period) indicate that with a reduction of the size of the deficit, interest rates have increased, not dropped.

Extending our analyses to the Euro area, the second largest capital market in the world, is also instructive. Figure 2 shows the combined fiscal surplus (or deficit) as a share of GDP of the countries forming the Euro area for the period beginning in 1998, when irrevocably fixed exchange rates were first announced,³ as well as the 10-year benchmark euro-bond yield, both nominal and deflated with the European harmonized index of consumer prices.

[Figure 2]

A quick comparison of Figures 1 and 2 shows that the fiscal turnaround in the Euro area followed the same timing, but was smaller than that in the U.S., with a peak in 2000 and a trough in 2003 when the deficit of the Euro area reached 3 percent. This 2003 figure happens to be exactly the maximum level of deficit that EU institutions consider the largest deficit that any single country is allowed to run without incurring into official warnings and fines from the European Commission, according to the SGP. Visual inspection suggests that nominal interest rates in the Euro area peaked in 2000, precisely at the time when the combined Euro area fiscal balance reached its peak, again in contrast with the claim that larger deficits (surpluses) are correlated with high (low) interest rates. In addition, when the

³ The euro area was formally launched on January 1st, 1999, then including eleven countries. It meanwhile includes 13 of the now 27 countries that are members of the European Union.

Euro area fiscal balance declined and reached the official floor (this meant that some countries were running deficits in excess of 3%) both nominal and real interest rates followed a downward trend.

The view that interest rates are little influenced by the size of fiscal imbalances is thus reinforced by a quick look at interest rate and deficit movements in the Euro area. If there exists a market mechanism by which, with an increased public borrowing, interest rates would move up, surely such a mechanism should be operative in both the U.S. and the Euro area. Evidence from visual inspection of the recent experience in these two currency areas, however, offers little or no support in either case.

Why have interest rates not responded the way fiscal discipline proponents claim in the face of such a sizeable turnaround in the U.S. fiscal balance? Why interest rates have not responded in the Euro area where the size of the fiscal deficit was the official concern of authorities? Visual inspection of the charts leads us to question the hypothesis that fiscal deficits increase interest rates, and indicates that repeated warnings about the danger of fiscal imbalance for the level of interest rates run counter the recent experience both in the U.S. and the Euro area.

Still, we cannot discard fiscal discipline warnings exclusively on the basis of a limited set of observations, that is, without taking a closer look at more comprehensive statistical studies. Thus, I will now turn on to a discussion of the econometric literature regarding the deficits and interest rates link in the U.S. and Europe.

3. DO FISCAL DEFICITS INCREASE INTEREST RATES? A CLOSER LOOK AT EVIDENCE FROM THE U.S. AND EUROPE

Evidence from the U.S.

Despite the public clamor of those that link deficits and interest rates, there is a fairly widely accepted view that “empirically, the linkage between budget deficits/surpluses and interest rates is weak” (Kliesen, 2002). This view is largely based on the findings of a wave of empirical studies set off by the rising public deficits in the 1980s that peaked at 6% of GDP in 1983 and averaged 5% between 1982 and 1992. The question was whether large fiscal deficits had an impact on interest rates, a hypothesis based on the logic that an increase in the issue of Treasury bonds at a faster rate than the growth of nominal GDP requires a sufficiently large increase in market interest rates to induce bond holders to increase their holdings of these securities.

In a popular study of this issue, Evans (1985) considered four periods in U.S. history when the size of the deficit was unusually large, including the 1979-83 Reagan administration’s record post-War deficit, but also the experiences during the Civil War, World War I and World War II, when the deficit ratio reached the magnitudes of 18%, 26%, and 30%, respectively. Evans’ analysis led him to conclude that “large deficits have

never been associated with high interest rates” (85). Evans explained how this result contrasts with the conventional IS-LM macro model, in which an upward sloping LM curve (with exogenous money) entails a positive link between a tax-cut induced Federal deficit on the one hand, and interest rates on the other. He explains this result with reference to Barro’s hypothesis that it is optimal for the private sector to react to a temporary increase in the Federal deficit by increasing savings by an equal amount. In the IS-LM model, this private sector response shifts the IS curve back to the left and prevents an increase in interest rates.⁴

In a subsequent study, and following a recommendation by Feldstein (1986) that empirical studies should test the impact of expected (rather than current) deficits, Evans (1987) focused on periods when expectations were presumably affected by expected legislation. He studied interest rates in the 12 months preceding 45 major tax changes in U.S. history (1908-1984), hypothesizing that interest rates would rise in anticipation of a planned tax cut, and fall in anticipation of a given tax hike. Still, he found no evidence that expectations of a larger (smaller) future deficit lead to an increase (decrease) in interest rates.

If Evans’ conclusions seemed unambiguous, a comprehensive survey by Barth et al. (1991) of 42 studies on the empirical linkage between public deficits and interest rates took a somewhat more cautious position, finding that “the available evidence on the effects of deficits [on interest rates] is mixed.” In other words the evidence is not sufficient to assert with confidence one way or the other on the relationship between changes in deficits and

⁴ Evans (1985) finds Barro’s hypothesis “implausible”, yet having predictive and explanatory power.

interest rates. It remains remarkable that the era of large public deficits ending in the early 1990s provided no unambiguous proof that deficits influenced long-term interest rates in the U.S.

With the decline in public deficits in the 1990s, there was renewed interest in the effects of changing fiscal imbalances and interest rates. Elmendorf (1996), for example, studied the period of the Gramm-Rudman-Hollings Law of 1985 and of the Budget Enforcement Act of 1990. He detected “a positive correlation between news about the progress of fiscal deficit projections and interest rates.” Elmendorf admitted, however, that he could not determine the magnitude of the impact.

The marked change in the Congressional Budget Office’s long-term budget outlook in 2001-02—predicting a disappearing surplus—again stirred a debate about the alleged linkage between deficits and interest rates. For Gale and Orszag (2002), a credible prediction of a worsening fiscal position would imply a reduction of national saving, investment, and growth, and rising interest rates. Challenging the reigning empirical view that there is at most a weak link between deficits and interest rates, Gale and Orszag (2002, 20) claimed that “studies that (properly) incorporate deficit expectations in addition to current deficits tend to find economically and statistically significant connections between anticipated deficits and current long-term interest rates.” Considering the role of deficit expectations, Gale and Orszag state that “estimates from the empirical literature that examine the relationship between interest rates and projected deficits are ... broadly consistent with an

effect of about 50 basis points after one year in response to a fiscal shift of one percent of GDP” (27).

Illustrating this empirical relationship, Gale and Orszag compare the CBO’s budget forecasts (often off-mark) and the steepness of the yield curve (not the level of long-term rates), thus disregarding the relationship between expected economic growth, expected deficit, monetary policy and yield curve steepness. Two years later, Gale and Orszag acknowledged in a footnote a problem with their empirical comparison. They wrote: “In a recession the projected unified deficit could increase merely because of the lingering effects from the rise in debt during the downturn; at the same time, the yield curve could steepen as short-term interest rates are depressed by Federal Reserve policy. This could potentially introduce an artificial relationship, actually driven by the business cycle and monetary policy, between the yield spread and the projected unified deficit.” (Gale and Orszag, 2004, footnote 116).

Gale and Orszag (2004) revisit the issue, this time using a methodology introduced by Laubach (2003). In an attempt to isolate the effects of a deficit from the state of the business cycle, Laubach had adopted a methodology which showed the statistical results of an estimated regression between projected fiscal deficits and the level of “forward interest rates” (e.g., interest rates expected to prevail five years ahead). This is obtained by omitting the near-term component from the long-term interest rate, and the idea is to better control for

the effects of the business cycle and associated monetary policy⁵, assuming that interest rates expected to prevail five years ahead are not influenced by current business cycle conditions. While claiming that this approach leads to more robust statistical results, Laubach finds for the period 1976-2003, a one percent increase in the projected deficit-to-GDP ratio raises long-term real interest rates expected to prevail five years ahead by 25 basis points. This was 50% smaller than the effect Gale and Orszag had found in their 2002 study.

In their 2004 paper, Gale and Orszag re-estimate Laubach's model and find a 25 to 35 basis points effect of five-year CBO projections on real forward rates. They provide no basis, however, for assessing the impact on actual long-term rates. As Galbraith (2005, 20-1) has noticed, "when control variables that [Gale and Orszag] themselves chose are entered into the equation, the effect of projected deficits on actual interest rates disappears." In sum, an assessment of the policy implications of Gale and Orszag's empirical findings would require an analysis of the meaning of a correlation between expected deficits and expected interest rates. I now take a closer look at these two variables.

The reason for considering expected future, rather than current, deficits was that if larger deficits cause higher interest rates, the speculative, forward-looking nature of financial markets should make this happen in anticipation of future deficits. This, however, represents an important change in perspective. It means that investors who believe in the claim that larger deficits bring higher rates will expect higher future interest rates following a forecast of

⁵ Although no attempt is made to decompose forward rates into expected rates and term premium.

a rising federal deficit. We are no longer dealing with a *market* response to rising federal borrowing needs. Rather, any correlation between expected deficits and interest rates, if and when sufficiently corroborated by empirical evidence for a given time period, would leave it open the question of the *nature of that link*. That is, a high direct correlation may reflect self-fulfilling expectations of investors, and not necessarily the existence of a fundamental market mechanism. It could simply be the result of investors' view that, for example, the central bank will raise rates in the face of a rising deficit. As Galbraith (2005, 19) put it, this might reflect "the belief, however irrational it may be, of financial market participants that they [the deficits] will have such an effect. In medicine, this would be called a psychosomatic disorder."

The use of CBO projections as a proxy for expected deficits poses additional problems. In the discussion at the end of Gale and Orszag (2004), they observe that CBO projections are generally very highly correlated with current deficits and current deficits are highly positively correlated, except for a few sharp differences. If those differences are dropped from the sample, the significance of the linkage between deficits and interest rates drops significantly. In addition, CBO projected deficits and actual deficits in the future are highly negatively correlated. Reynolds (2004, 3) notes that "it is difficult to see how estimated deficits could have effects that actual deficits do not have, since past estimates have been widely inaccurate" and "if interest rates actually depended on such unreliable estimates (as Rubin, Orszag, and Sinai contend), bond yields would have been extremely low in early 2001 and would be

much higher today.” (emphasis in original) As one can infer from Figure 1, this has not been the case for real or nominal rates.

There is a stronger rationale for including the forward, rather than the current, long-term interest rate. Current rates are affected by business cycle conditions. If interest rates depend on the deficit, as well as on autonomous spending and inflation expectations, i.e., on the cyclical conditions of the economy, then the effect of a deficit on interest rates may remain hidden. When we consider real forward rates instead of actual long-term rates, however, we are left with the same puzzle as described above. Figures 3 and 4 compare fiscal balances in the U.S. and the Euro area with real forward rates, and the picture is unchanged: *real forward rates seem unaffected by swings in the fiscal deficit.*

[Figure 3]

[Figure 4]

Can critics account for the natural experiment? How do the proponents of the deficit-interest rate link respond to this evidence? Gale and Orszag (2002) have responded on three grounds. First, they argue that “the fact that long-term nominal interest rates are low does not mean they would not have been lower in the absence of the deterioration in the long-term fiscal outlook.” The implication here is that there are more important determinants of interest rates than the fiscal imbalance. Until those forces are clearly identified, the proponents of a link can hardly be said to have carried the day. Equally unconvincing is their argument that real interest rates are “not as low relative to historical levels as nominal rates

are.” Their point of comparison is the historical trough of the negative rates of the inflation decade, hardly an appropriate yardstick for today’s low-inflation economy, especially in light of the persistent low levels of real rates through 2006 (see Figure 1).

Rubin, Orszag and Sinai’s (2004) third argument seems the weakest. They justify the lack of a positive relationship between deficits and interest rates during the last U.S. downturn by arguing that “it is possible that during economic downturns financial markets do not focus on long-term fiscal issues; if this is the case, the effect of the fiscal deterioration on long-term interest rates will manifest itself only as the economy recovers.” Ad hoc as this argument may be, it is also not supported by the evidence. Interest rates during and after U.S. economic recovery have remained low, except for a small upward movement in response to expected monetary policy, and in conjunction with an improved fiscal outlook.

Finally, and as noted above, these authors emphasize the coincidence of rising deficits and a steepening yield curve. But this finding is inconsistent with their emphasis on the level of the interest rates as opposed to term differentials. As Reynolds (2004, 5) has effectively noted, “the hypothesis that projected deficits steepen the yield curve and the contradictory hypothesis that they raise real interest rates both undermine the authors’ central claim that projected deficits reduce economic growth.”

Evidence from Europe

Extending the exploration of a link between deficits and interest rates to other countries

may prove illuminating. Gupta and Moazzami (1996) found no conclusive evidence to support the belief that the high interest rates of the 1980s and 1990s in the developed world have been caused by high budget deficits. The results for 11 developed countries show that generalizations across the sample countries can be hazardous and that factors specific to individual countries are of vital importance. Vieira (2004) found no causal effect in six EU countries, but found evidence of a reverse impact of interest rates on fiscal balance. Ducoudré (2005) in a study of Europe finds no mechanical relationship between budget deficits and interest rates: rather, effects seem to depend on the policy mix. García and Ramajo (2004) find that budget deficits in Spain did not appear to raise long-run nominal interest rates in the period 1964-2000.

Other empirical studies have approached the question from the standpoint of the effect of an increasing budget deficit on the government bond risk premium: larger deficits may increase the risk premium on outstanding government bonds. The notion suggests a positive correlation between budget deficits and government bond yields if investors perceive a rising default risk.

Theory alone provides no unambiguous criterion, or debt threshold, by which traders can assess the default risk of governments.⁶ In practice, traders' expectations are likely to follow a discontinuous process, by which a zero default risk may continue in spite of rising deficits,

⁶ The notion of "unsustainable deficit" provides no help: an unsustainable deficit is a deficit that causes a rising debt/GDP ratio: if the ratio between the current deficit and the outstanding debt is greater than the nominal rate of growth of GDP, then the debt/GDP ratio is rising and debt is "unsustainable". In traders' practice, evaluation of the risk implicit in a rising ratio depends on the variety of circumstances leading to such increase, as well as to the outlook of its future dynamics, including expectations of when the ratio is likely to stabilize.

until at some point traders begin to perceive and share concerns about the government's future ability to honor debt obligations, or simply begin to fear a devaluation of the currency in which sovereign debt is denominated.

The empirical evidence in the U.S. and the Euro area does not provide support for the hypothesis that larger deficits increase the risk premium on government bonds. Referring to fiscal policy announcements involving Italy, France, Germany and Portugal in 2002, a study of swap spreads⁷ by Afonso and Strauch (2004, 40) finds a “lack of a persistent and systematic reaction of the default risk premium” in 2002, a year including a number of fiscal policy events (such as several countries coming close or breaching the SGP, an excessive deficit procedure being implemented for the first time, and a public debate about the soundness of European fiscal rules). Heppke-Falk and Hufner (2004) find no significant influence of projected deficits on the swap spread in Germany, France and Italy, for the 1994-2004 period. Only after 1997, when the SGP was signed in anticipation of the adoption of the single currency, they find some evidence (though limited to Germany and France, not Italy) of an impact of rising expected deficits on government bond yields. The authors explain this empirical finding as a result of the SGP increasing transparency on fiscal policy and strengthening the “market disciplinary effect,” but that can also be explained by the adoption of a common currency, the loss of each country's ability to have the central bank financing the debt, an institutional definition of what is to be considered

⁷ Difference between banks' swap rates and government bond yields.

“unsustainable” deficit, and the impact of all this on how market expectations are formed..

Private financial concerns also seem to be unconvinced by the notion that market mechanisms link budget deficits with interest rates. Wesbury and Forres (2003), expressing the view of investment bank GKST, claim that deficits do not cause higher interest rates. In their view, it is monetary policy that influences interest rates, fiscal imbalances, and even the rate of economic growth. Another note by Silipo (2006), writing for investment bank Ixis, finds that the yield spread between Italian and German government bonds is explained by economic growth and monetary policy, not by the size of the deficit in Italy and Germany. In this view, chief determinants of the Italian-German yield spread are short-term interest rates (presumably for their impact on the relatively larger and shorter-duration Italian debt), and political factors relating to the future of the euro area. Finally, in its 2005 UK Economic Outlook, PricewaterhouseCoopers finds for the UK during 1985-2005 “no convincing evidence that either actual or projected budget deficit or debt levels have had a significant positive relationship with real interest rates (31).

4. FISCAL DEFICITS: ACTIVE OR PASSIVE?

Our review of the empirical literature has failed to uncover support for the proposition that a rising deficit increases interest rates and slows down growth or, consequently, that an active deficit-cutting policy would be conducive to growth. What then, we must ask, can fiscal policy do for sustainable economic growth?

A well-known macro identity, derived by either national accounting or flow-of-funds identities, links the fiscal balance to the domestic and foreign saving-investment differential, as follows:

$$\text{Household Savings} + \text{Business Profits} - \text{Residential and Investment Spending} \equiv \text{Government Deficit} + \text{Trade Balance}$$

When the public and the foreign accounts are both balanced (i.e., the right-hand side of the identity is zero), domestic saving (including household savings and business profits) is matched by overall domestic investment spending. This is equivalent to the identity between domestic saving and investment in a closed economy. By contrast, an excess of domestic investment spending over private savings (i.e., when the left-hand side of the identity is negative) requires some combination of government surplus and/or trade deficit (as the right-hand side of the identity must also be negative). If foreign trade is balanced, then a government deficit (surplus) always fills the positive (negative) gap between domestic saving and investment.

An accounting identity cannot by itself establish cause and effect relationships. It can, however, provide a framework to describe two alternative views of the fiscal balance. In one view, the size of the fiscal balance is an active element determined by policy makers, that is, a means to control the economy. Fiscal policy determines the size of the fiscal balance and this

will have a ripple effect on the macro-economy. Fiscal transmission in this case will operate through direct and indirect effects on aggregate demand and interest rates.

An alternative view is that the size of the fiscal balance is a passive element, dominated by what happens in the balance of the other sectors. This does not mean that fiscal policy is powerless. Rather, it entails an approach to fiscal measures that is driven less by considerations of the immediate impact on the *size* of the deficit, and more by the effectiveness of measures in providing favorable conditions for business investment, for example reduced uncertainty and a growing market. It means that the ultimate fiscal balance is the indirect result of the interplay of activity in many sectors of the economy and the resulting level of national income. Thus, the fiscal authority can control the balance indirectly, by making decisions on the level and especially on the *structure of spending and taxing*, in such a way as to influence the other sectors in the desired fashion.

Under the view that fiscal policy is active, a provision to cut the deficit will, assuming that the trade balance is dominated by outside influences that policy makers cannot control, cause a reduction of the differential between domestic savings and investment. Two scenarios are possible. In the first, consistent with the textbook IS-LM model with exogenous money, a deficit cut prompts a fall in aggregate demand, lowering GDP, lowering interest rates, and improving the trade balance. Deficit reduction would thus be matched by a combination of lower savings and fewer imports at a lower level of activity. In the second scenario (consistent with the long-run model invoked by Gale and Orszag), a deficit cut prompts lower interest

rates and this, in turn, stimulates investment until a new macro-economic equilibrium is restored, with a lower deficit and a higher level of investment (and thus a greater future output potential). The exogenous deficit reduction would here be matched by a shrinking saving-investment gap, primarily driven by an increase in business investment.

If one instead takes the second view, that the size of the fiscal balance is largely endogenous, the resulting picture is quite different: a reduced fiscal deficit is either a consequence of an improved trade balance or of an increase in investment spending.⁸ This view sheds light on the changes in the fiscal balances in the U.S. and Europe. The reversal from deficits to surpluses in the U.S. between 1992 and 2000 was associated with an investment boom that more than offset the worsening U.S. trade balance. After 2000, the combined effects of an accelerating trade deficit and a slowing of business investment has generated a reversal of fiscal accounts from surplus to deficit. Figure 5 shows business investment and fiscal balance for the U.S., and Figure 6 for the Euro area.

[Figure 5]

[Figure 6]

In the endogenous deficit approach, interest rates are unrelated to the size of the federal deficit, and the value of fiscal policy is its effectiveness in stimulating business investment. Whether this is achieved by changes in expenditure or taxes or an adjustment of both is less relevant. It is the overall success of the policy in terms of the increase in business investment

⁸ For the world economy, for which the foreign balance is by definition zero, the primary force is business investment.

that will improve the fiscal accounts. Before taking active measures to cut the size of the deficit, policy makers should seek first to selectively adjust fiscal policy to achieve growth objectives. When tax hikes and spending cuts reduce growth opportunities and business investment drops, the fiscal imbalance is likely to increase, not decrease.⁹

5. POLICY IMPLICATIONS AND CONCLUSIONS

The more pragmatic approach to fiscal (and monetary) policy by the U.S. authorities is increasingly viewed approvingly by concerned Europeans who see EU institutions as too rigid. By contrast, a mounting concern about fiscal profligacy and rising interest rates in the U.S. (where fiscal policy is much more flexible) has prompted measures aimed to reduce the size of the Federal deficit. In the context of these apparently contradictory positions, this paper has revisited the question of whether rising deficits increase interest rates, and whether deficit-cutting (and balanced-budget) policies are conducive to economic growth.

There are fundamentally two reasons for rejecting the view that restoring fiscal equilibrium through active deficit-cutting measures is a means to encourage private investment and economic growth. On empirical grounds, there is no persuasive evidence of a mechanical link between deficits and interest rates in either the U.S. or in Europe. Those who worry about the effects of fiscal deficits focus on the existence of an effect of expected deficits on

⁹ During a similar debate in the late 70s and early 80s, Steindl (1983, 237) countered the argument that fiscal retrenchment is a means to stimulate growth arguing that “attempts at reducing the budget deficit by retrenchment are mostly doomed to failure” and “on certain conditions it would seem therefore that the best way to combat a deficit is to increase spending.”

real forward rates, but miss a convincing interpretation of why the alleged link has not been observed in the U.S. in the past 15 years, and why it was absent from the experience of the Euro area so far.

From a macroeconomic perspective, active attempts at reducing the budget deficit will prove self-defeating unless business investment increases. This suggests that fiscal stability and economic growth are not achieved by giving priority to deficit reduction, as this does not provide a means to lower rates and enhance growth prospects. A set of deficit-cutting measures is not the best strategy to reduce fiscal deficits, prevent interest rate hikes, and stimulate growth. Rather, stability and growth can be accomplished through an appropriate mix of public sector spending and tax rates in such a way as to generate the desired macro effect of stimulating business investment, an exercise that is likely to (although it does not always) require a rising government deficit.

A lesson for Europe is that if structural fiscal policy matters, this should be more effectively implemented at the “federal” rather than at the national level. A more centralized fiscal management in Europe would allow a flexibility like that enjoyed by the U.S. Rigid conventions can significantly limit the effectiveness of business investment incentives: any expansionary fiscal policy that nears or passes a predefined “excessive deficit” limit inevitably creates expectations of reversal.

A lesson for U.S. fiscal policy is that there is no use in adopting fiscal policy rules like those in Europe. Consideration should be given to the quality of fiscal policy, not to deficit-

cutting measures, including the current tax structure.¹⁰ A forward-looking view of fiscal policy requires that policy-makers focus on the impact of fiscal provisions on growth and investment. Shifting the target of fiscal policy from the *size* of the deficit to the mix of taxing and spending that best serves the purpose of stimulating business investment is key to achieving growth and stability objectives.

There may be serious problems with U.S. and European fiscal policy, but without compelling empirical evidence, a blind commitment to deficit reduction as a means to achieve long-term growth remains unwarranted. Indeed, enlightened politicians who wish to pursue the public interest (or enlightened voters who wish to give a political mandate in their long-run economic interest) may be better off pursuing other priorities than balancing the budget.

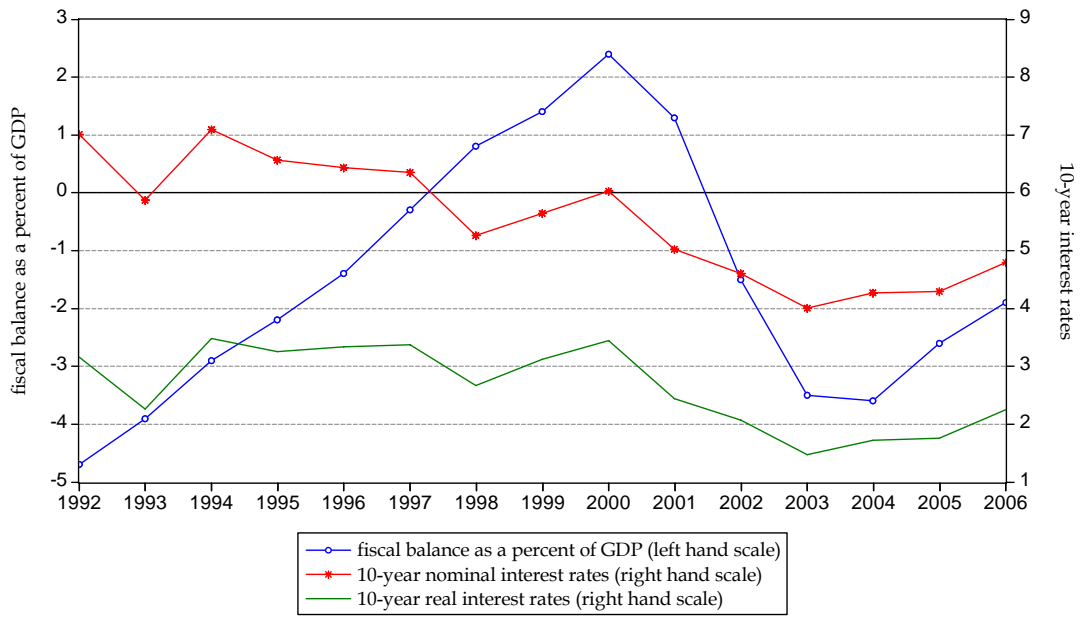
¹⁰ The shrinking of the U.S. Federal deficit as a result of a combination of a much less progressive tax system and an economy where income inequalities increase may be good news for balanced-budget objectives, but it is bad news for future growth and stability.

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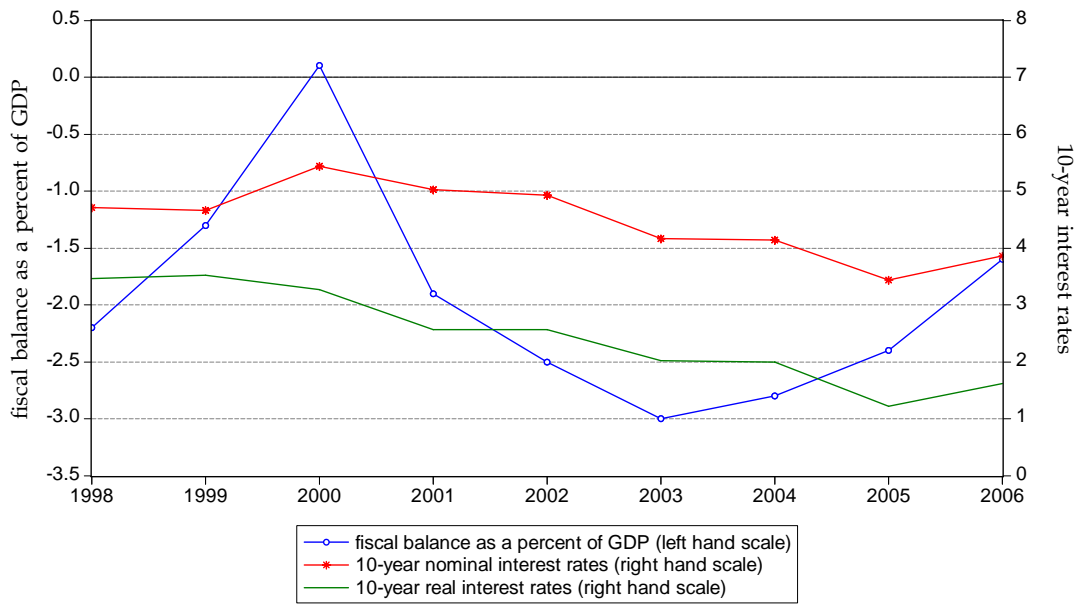
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Figure 1: U.S. Fiscal Balance and Interest Rates, 1992-2006



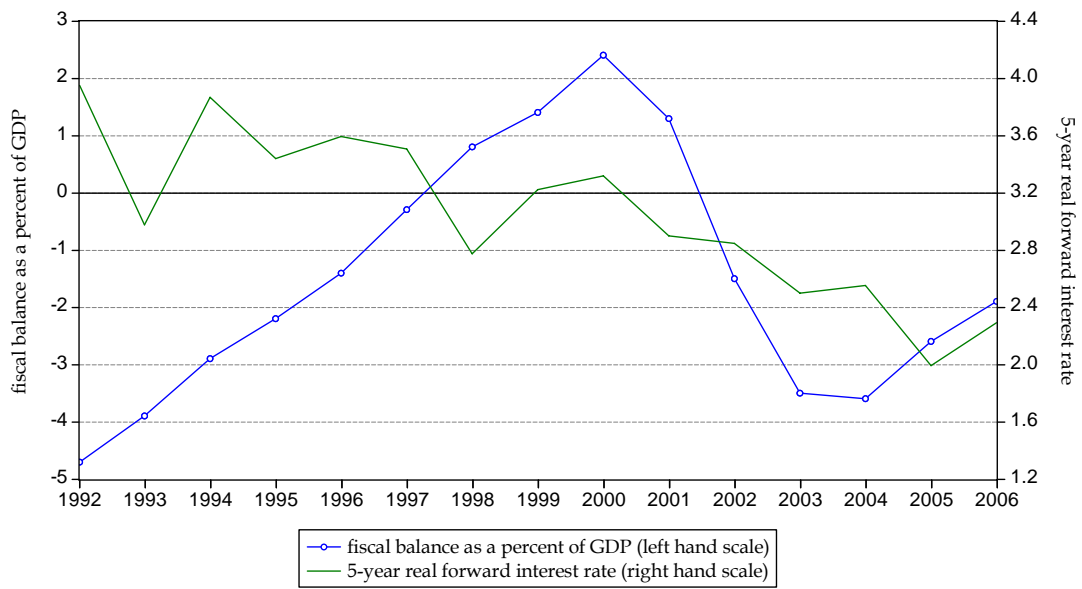
Sources: White House Office of Management and Budget; Federal Reserve.

Figure 2: Euro Area Fiscal Balance and Interest Rates, 1998-2006



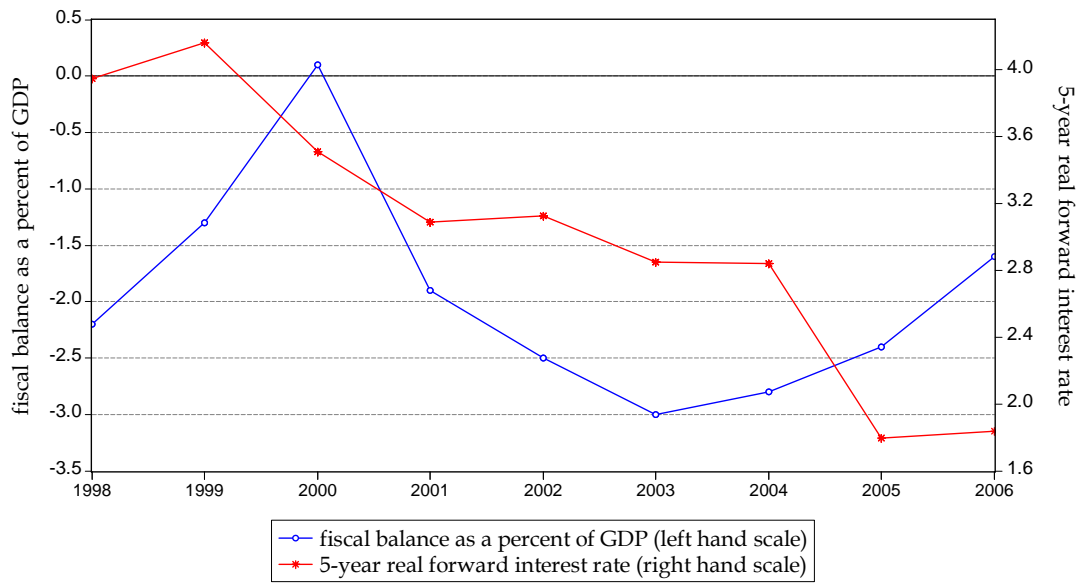
Source: European Commission

Figure 3: U.S. Fiscal Balance and the 5-Year Real Forward Interest Rate, 1992-2006



Sources: White House Office of Management and Budget; Federal Reserve; Survey of Professional Forecasters.

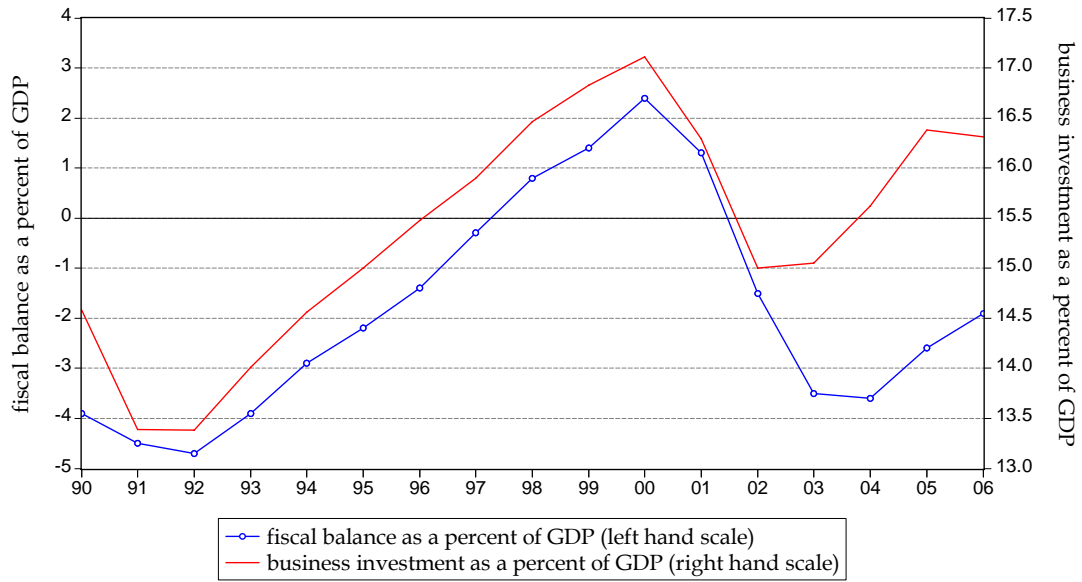
Figure 4: Euro Area Fiscal Balance and the 5-Year Real Forward Interest Rate, 1992-2006



Source: European Commission

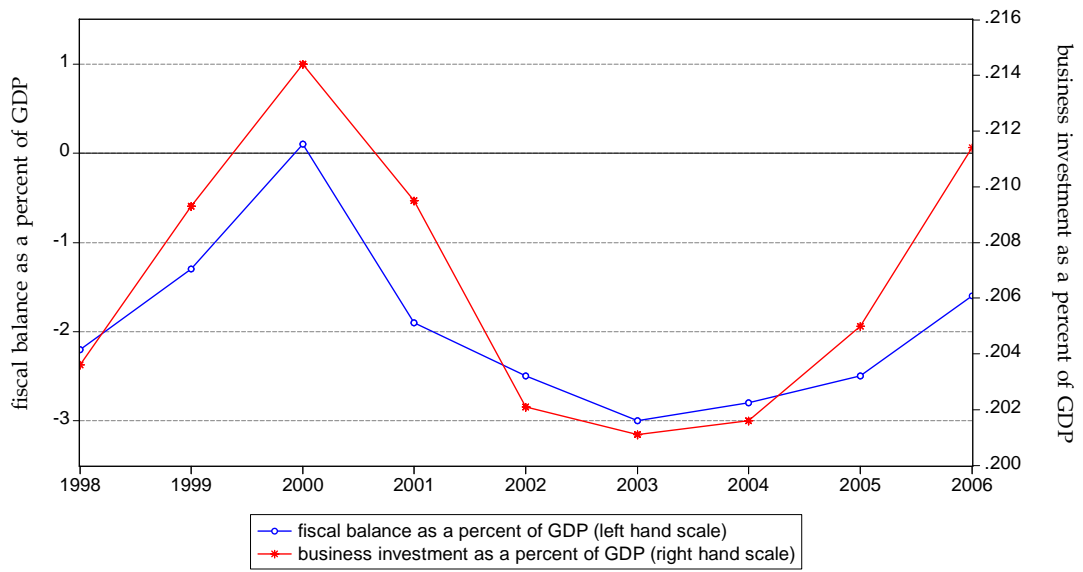
Note: See Figure 3. The real rate is obtained by deflating the nominal rate using the Harmonized Index of Consumer Prices.

Figure 5: Business Investment and Fiscal Balance in the US, 1990-2006



Sources: White House Office of Management and Budget; Reuters

Figure 6: Business Investment and Fiscal Balance in the Euro Area



Source: European Commission; Reuters