Debt sustainability and economic convergence of euro-area Member States: Challenges and Solutions

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Provided at the request of the Economic and Monetary Affairs Committee
IN-DEPTH ANALYSIS

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Abstract

The Eurozone is at risk of economic stagnation and the crisis has led to the most pervasive and pronounced increase in government debt-to-GDP ratios since the Second World War. Member countries are facing vastly differing economic growth rates, with some displaying hardly any recovery since the crisis began. This note puts forward proposals aimed at fostering economic convergence while ensuring debt sustainability for the member states.
This paper was requested by the European Parliament's Economic and Monetary Affairs Committee.

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LIST OF ABBREVIATIONS

CAPB    cyclically-adjusted primary balance
ECB     European Central Bank
G-20    The Group of Twenty
GDP     Gross domestic product
OECD    Organisation for Economic Co-operation and Development
IMF     International Monetary Fund
VAT     Value-added tax

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EXECUTIVE SUMMARY

This paper encourages European policymakers to recognize the striking diversity of economic growth experiences across the EU in the aftermath of the financial crisis, as well as prospects for potential growth and population aging.

Against such background, it makes the following recommendations that can be implemented in the near term:

- Increase the share of growth-promoting items, such as infrastructure and education, in total spending.
- Cut social security contributions for youth.
- Implement a modest fiscal stimulus in the countries that have the fiscal space to do so.

In the short to medium horizon, some assistance to highly indebted countries would be desirable. To accomplish this in an efficient and fair manner, the paper suggests:

- Signaling a readiness to improve the terms of European official lending to highly indebted countries, conditional on continued reforms.
- Indexing the interest rate on official lending to the borrowing country’s GDP growth.

In medium and longer term, the European Union can improve the credibility of the fiscal policies of its member countries by considering the following adjustments:

- Ground fiscal plans on realistic economic growth projections for the next decade.
- When judging fiscal and debt sustainability, take aging-related spending into account.
- Escape clauses should be based on numerical criteria, not on structural reforms whose impact is hard to estimate.
- Commit to undertaking a systematic evaluation of the transparency of Member States’ public finances
- Encourage all Eurozone countries to undertake expenditure reviews and to implement related proposals.
- Change the estimation method for potential output growth to ensure that it is not overly sensitive to unanticipated declines in the level of output.
- Encouraging governments of EU countries to coordinate issuance of growth-indexed bonds.

The effects of fiscal policy interact with monetary policies. Policymakers ought to support the ECB in its efforts aimed at restoring euro area inflation to a rate of 2 percent, including unconventional measures.

Going forward, a European vision ought to include more significant, truly European revenues, to support expenditures and common bonds issued at the European level.

Finally, Europe needs to prepare to reap the opportunities presented by the vastly changing economic landscape of the next decades, by increasing trade and market integration with emerging and developing economies.
1. INTRODUCTION: SETTING THE STAGE

1.1 The current macroeconomic situation

The Eurozone faces a serious risk of prolonged economic stagnation during the next decade. Economic growth remains low, the unemployment rate is unacceptably high, especially for the youth in most of Southern Europe, and inflation is expected to remain exceptionally low for several years. The impact of the global economic and financial crisis that began in 2008 was initially greater in the United States, but since 2012 the pace of economic recovery there has outstripped that of the European Union and the Eurozone in particular, with higher output growth and a more rapid reduction in the unemployment rate (Figure 1). The recent, sharp decline in oil prices and the European Central Bank’s expansionary monetary stance are unambiguously helpful for the Eurozone, but their economic impact is insufficient to remove the risk of prolonged stagnation.

Figure 1: Unemployment and real GDP in the euro area and in the United States
The advanced economies’ experience in rebounding from the crisis has been highly diverse across countries. Although the crisis hit most advanced economies forcefully in 2008 and 2009, the patterns of recovery since then have displayed striking differences—even within Europe and within the Eurozone—and thus merit a detailed analysis upfront. (Appendix 1 provides background to the following discussion, by outlining the selection criterion and the algorithm used to assign countries to each group, based on the observed behavior of their gross domestic product during the past fifteen years.)

Among the countries that saw a sharp output decline in 2008–09, at one extreme are those that underwent a “moderate recession” (e.g., United States) or a “major recession” (e.g., United Kingdom), but seem to have returned to growth rates similar to those experienced prior to the crisis, albeit after a permanent output level loss (Figure 2). At the opposite extreme, are the “growth tragedies” of those countries (e.g., Greece) whose output has fallen continuously since the start of the crisis. For those in-between, the crisis has had important and long-lasting effects nevertheless. Many countries that had grown rapidly prior to the crisis, consistent with economic convergence after the transition from a command economy, or fuelled by long-lasting booms in credit and capital inflows, have more recently seen their growth rates stunted—some after a moderate recession (e.g., the Czech Republic), others after a severe recession (e.g., Estonia). Finally, several countries whose growth had been moderate prior to the crisis have since faced an even further slowdown (e.g., the Netherlands) and, despite a slight uptick after 2009, their output has not yet “recovered” to its 2007 level.

Such diversity of experiences is highly unusual by historical standards in the advanced economies and poses extraordinary challenges to policymakers in addressing it, particularly when some policy instruments (such as monetary policy) can no longer be tailored to country-specific circumstances and fiscal policy is constrained, as discussed further below.

1.2 The current state of the public finances

The crisis has also led to the most pronounced and pervasive increase in the public debts of advanced economies since the Second World War. General government debt rose to 114% of GDP on average in the advanced economy members of the G20 at the end of 2014, from 78% in 2007. Most of the fiscal impact has occurred through “automatic stabilizers” including lower revenues and, to a much lesser extent, higher spending on items such as unemployment benefits. Other factors include fiscal stimulus (for countries where market conditions permitted it) and the fiscal implications of government support to banks and state-owned enterprises. Indeed, in a few cases, including countries in the Eurozone, an important factor was the materialization of fiscal risks that were not previously captured by the headline fiscal deficit and debt data. Examples of such increases in government debt include those stemming from obligations related to public-private partnerships and state-owned enterprises in Portugal,¹ the banks in Cyprus and Ireland, and extremely inaccurate information on the true state of the public accounts in Greece at the outset of the crisis.

Despite significant reductions in the fiscal deficits since 2009 in most of the Eurozone, deficit levels remain large in several member countries where, as a consequence, government debts are still rising as a share of GDP (Table 1) and require attention. Although evidence on the impact of public debts on economic growth is rather weak, the crisis demonstrated the importance of preserving sufficiently low debt levels in order to be able to afford fiscal stimulus during an economic downturn. Moreover, large debts are clearly a source of risk. The experience of 2011–12, when sovereign bond spreads rose as high as 600 basis points in several Eurozone countries including Italy and Spain, and a self-fulfilling debt crisis was narrowly averted (thanks in part to verbal intervention by the European Central Bank), has highlighted the vulnerabilities associated with high debt levels. Simply put, the higher the debt, the larger the impact of an increase in interest rates on the fiscal deficit, and thus the greater the snowballing effects.

on the debt. In hindsight, developments during the crisis suggest that “prudent” levels of debt may be even lower than those prevailing at the outset of the crisis (Blanchard and others, 2013).

**Figure 2:** GDP growth before and after the economic crisis

*Moderate growers, moderate recession*

- Belgium
- Canada
- France
- Malta
- New Zealand
- Norway
- Switzerland
- USA

*Moderate growers, major recession*

- Austria
- Denmark
- Germany
- Japan
- Sweden
- United Kingdom
Growth tragedies

Fast growers, major recession, growth stunted

Croatia

Greece

Italy

Slovenia

Portugal

Spain

Czech Republic

Luxembourg

Serbia

Slovak Republic
Fast growers, severe recession, growth stunted

Bulgaria

Estonia

Latvia

Lithuania

Iceland

Ireland

Romania

Moderate growers, now halted

Cyprus

Finland

Hungary

Netherlands
It is thus worth asking what degree of fiscal adjustment would be necessary to reduce the debt to 60 percent of GDP by 2030. Table 1 reports the estimates published by the International Monetary Fund’s Fiscal Monitor (October 2014). Figure 3 reports the size of the necessary improvement in the general government’s cyclically adjusted primary balance (grey bar) that would bring the debt down to 60 percent of GDP by 2030. On average (unweighted), the Eurozone economies in the sample would have to

2 Specifically, this illustrative exercise regularly reported in the IMF’s Fiscal Monitor asks how much the cyclically-adjusted primary fiscal balance (CAPB) needs to be improved by 2020 (and subsequently maintained until 2030) in order to bring the debt-to-GDP ratio down to 60 percent of GDP in 2030. The primary fiscal balance is the overall fiscal balance (revenues minus expenditures), minus interest payments, which are often outside the control of the government. The cyclical adjustment cleans
improve their CAPB by about 2 percentage points of GDP to bring the debt-to-GDP ratio down to 60 percent by 2030.

Figure 3: Required adjustment in the CAPB between 2014 and 2020

Reducing fiscal deficits is an even greater challenge for most advanced economies when the projected rise in ageing-related (pensions and health care) spending is taken into consideration. The black bar adds the projected additional, ageing-related spending (per year) that each country will have to undertake by the year 2030. The forthcoming increase in age-related spending will require offsetting measures in revenues, other types of spending, or ageing-related spending itself, and will thus require additional fiscal effort compared with that depicted by the grey bars.

the fiscal data from the impact of differences in countries’ positions in the economic cycle. In other words, the CAPB is the most accurate measure of the government’s fiscal effort, stripping out changes in interest rates and GDP that are beyond its control.

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Interestingly, as is evident from Figure 3, countries’ rankings in terms of the necessary fiscal effort change significantly when information on future ageing-related spending is taken into consideration. Indeed, the projected increase in the annual flow of ageing-related spending, comparing 2030 with today, ranges from essentially nil in Italy to 6–6½ percentage points of GDP in the Netherlands and the United States. Appendix 2 provides further background by reporting the information on the projected net present value of future ageing-related spending by each advanced economy.

1.3 Prospects for economic growth during the next two decades

Part of the reason why the necessary fiscal adjustment to stabilize or reduce the debt ratio is so large is that the prospects for economic growth during the next ten or twenty years appear relatively dim. To what extent, if at all, can these prospects be ameliorated by policy action?

Economists are currently engaged in a debate on whether the advanced economies—and the Eurozone in particular—are in the midst of a “secular stagnation” associated with weak demand or whether lower growth should be attributed to other factors related to technology, demographics, or bureaucratic obstacles to entrepreneurship and job creation. In theory, the source of the decline in growth determines the right policies. Properly defined, secular stagnation in its strict sense refers to a situation in which nominal interest rates would have to become negative (which cannot be sustained) for aggregate demand to be restored to the level necessary for full employment. In that situation, fiscal stimulus—if investors are willing to finance it on a sufficient scale—would boost aggregate demand and possibly prevent secular stagnation. In practice, however, we do not know the extent to which the current slowdown reflects lack of demand or other factors. And as years go by, these distinctions become blurred and somewhat academic—for example, lacklustre investment initially caused by weak demand eventually results in slower technological progress, thereby curtailing potential growth.

Ultimately, from an operational standpoint, what matters is whether economic growth in the next decade or two is going to be lower than policymakers thought it would be when they were setting fiscal policy. Economists who are brave enough to make projections for the next ten or twenty years have by now revised such projections downward compared to those made before the crisis, especially for countries that have suffered more pronounced drops in the level of output. To sum up, regardless of whether the advanced economies are facing secular stagnation or a more general reduction in potential growth, prospects for the Eurozone are likely to remain dim for the next decade.

Instead, long run economic growth in the rest of the world is projected to be driven to a greater extent by the developing and emerging economies, including perhaps more novel sources such as Sub-Saharan Africa, which has already grown rapidly in recent years and is projected to experience a demographic boom during this century. During 2013–35, working-age population will increase by 800 million inhabitants worldwide; almost half of that increase is accounted for by Sub-Saharan Africa, and almost a quarter by India, whereas the group of advanced economies will see a small net decline.3 The scale of these demographic shifts will become even more pronounced in the remainder of the 21st century. This raises the issue of how Europe can best prepare for significant transformation in the sources of growth in the world economy.

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2. POLICY IMPLICATIONS: NEAR- AND MEDIUM-TERM PROPOSALS

2.1 Adapting the Fiscal Stance to Lower Economic Growth

Proponents of the “secular stagnation” hypothesis have argued for a further boost to public spending in an effort to help economic growth recover. However, as noted above, it may well be time to accept that the prolonged growth slowdown cannot be avoided. In plain language, if the rate of economic growth during the next two decades is indeed going to be lower than anticipated when we made our plans for the provision of public goods and services, it is time to recognize that we are poorer than we had previously thought. Future public expenditures will need to be reduced commensurately or our tax bill will need to rise. Many societies have paid a steep price in the past for failing to heed this unpleasant, simple message.

Overestimating the rate of economic growth has significant implications. Consider a country that, under current policies, would produce a stable government debt-to-GDP ratio equivalent to 100 percent of GDP over the next decade or two. Were real economic growth to be 1 percentage point lower than previously assumed (while keeping interest rates and inflation constant), the debt ratio would rise to 140 percent after 10 years and, as deficits become even larger, to well above 200 percent after 20 years.

Policymakers often mistake a long-lasting growth slowdown for a temporary slowdown, and fail to adapt fiscal policies accordingly. A recent study on a large panel of countries over the past century documents that policymakers systematically fail to increase the primary fiscal surplus sufficiently when the long-run economic growth rate declines (Mauro and others, 2013).

Economic history provides several examples of debt crises or near crises caused by unexpected, long-lasting slowdowns in economic growth that were not recognized in time. These include the steep rise in public debt in the advanced economies (especially Japan) during the 1980s and 1990s, the Latin American and other middle income debt crises of the 1980s, and the highly indebted poor country crises of the 1990s. Curbing overall government expenditure growth to affordable levels in view of more modest output growth will be one of the defining policy challenges of the next decade.

- **Recommendation:** Ensure that fiscal plans are based on realistic economic growth projections for the next decade ("potential growth rates"), and accept that expenditure growth has to be reduced accordingly or taxes will need to rise.

2.2 Encouraging macroeconomic stimulus where it is feasible

While the scope for fiscal stimulus is constrained for most Eurozone members, given the weak economic recovery a few (for example, Germany and the Netherlands) would benefit from a modest stimulus consistent with respecting the Stability and Growth Pact (SGP) and their own domestic rules.

- **Recommendation:** encourage a modest fiscal stimulus in the countries for which it is consistent with the SGP and domestic rules.

Greater scope for helpful stimulus exists in the area of monetary policy. Indeed, the European Central Bank has begun using unconventional measures more vigorously. For economic convergence in medium term, higher average inflation is needed in the Eurozone to permit a positive inflation differential in the rapidly growing countries with a current account surplus compared with the slower growing countries currently experiencing a current account deficit. Note that this implies inflation significantly above 2 percent in the faster growing economies, to avoid deflation in the slower growing economies.

- **Recommendation:** Support ECB efforts, including unconventional measures, aimed at restoring Eurozone inflation to a rate of 2 percent. Over the medium term, encourage the ECB to aim at
2 percent inflation on average over its policy time horizon (that is, to tolerate inflation occasionally in excess of 2 percent for brief periods).

2.3 Widen and Improve Monitoring of Fiscal Indicators and Fiscal Risks

In light of the major fiscal impact from the materialization of fiscal risks observed during the crisis, it is necessary to improve the monitoring, disclosure and management of such risks.

- Recommendation: Eurozone countries should commit to undertaking a systematic evaluation of the transparency of their public finances, such as the IMF’s Transparency Assessment as already undertaken in Ireland and Portugal.

As noted above, when considering countries’ need for fiscal adjustment, it is important to look beyond the existing stock of government debt as a share of GDP and to take into account the extent to which projected increases in age-related spending will add to the challenge of fiscal deficit reduction.

- Recommendation: When judging fiscal and debt sustainability, take ageing-related spending into account.

2.4 Stand by the SGP and Make it More Intelligible for Eurozone Citizens

Several commentators are under the impression that the cause of fiscal austerity in the Eurozone is the SGP, and they have called for scrapping it. This is misguided. Fiscal policy for many members of the Eurozone is constrained by a more powerful and less predictable force, that of financial markets. The experience of 2010–12 has forcefully illustrated how quickly an increase in borrowing costs can inflict damage. In this light, the SGP is a helpful anchor for the expectations of investors (including ordinary Eurozone households who place their modest savings in government bonds), and calls for scrapping the SGP are simply counterproductive.

This said, the current architecture of fiscal rules has become overly complicated, with reforms upon reforms of rules and escape clauses rendering the exercise inscrutable for the uninitiated. Even experts often have differing interpretations of what the SGP actually implies. Indeed, the fact that the Commission had to issue a clarification of its interpretation of the existing flexibility in the agreements made it apparent how unclear the architecture had become over the years. The clarification is to be welcomed, but it is symptomatic of the need to simplify the rules while maintaining their spirit.

Excessively complicated rules risk being misperceived by ordinary citizens as cover for behind-closed-doors negotiations between governments and Commission representatives. In turn, this would undermine the perceived legitimacy of the rules, which are necessary to preserve the health of the public finances for the benefit of all taxpayers and citizens. Fiscal rules work best when they are simple, easily understood, and reasonably flexible to accommodate shocks without the need for overly frequent changes.

- Recommendation: Make the SGP more intelligible to the general public. Re-found it by keeping its truly important features and dropping unnecessary details and excessive references to past versions of the rules.

2.5 Technical improvements to the application of the SGP

The operational application of the SGP can be improved without changes to its design. On the whole, the Commission’s recent moves to explain how the existing degree of flexibility is being applied are welcome, although full clarification will occur only through practical application and precedents established over time. Based on the Commission’s statements, it would appear that there is a risk that excessive flexibility will be provided in exchange for structural reforms. In the past, countries were
appropriately given credit for pension reforms whose fiscal impact was easy to estimate. However, giving countries credit for the impact of structural reforms on potential growth could create the scope for an overly politicized bargaining process. In fact, the economics profession does not fully understand the determinants of economic growth, let alone the impact of structural reforms on economic growth. Instead, flexibility should be primarily based on well-defined numerical escape clauses, such as those linked to negative growth or prolonged output weakness, which are clearly not open to negotiation.

- **Recommendation:** Escape clauses should be based on numerical criteria, not structural reforms whose impact is hard to estimate.

This said, the application of numerical escape clauses requires reasonable methodologies to support them. The agreed techniques currently used by the Commission to estimate potential output growth are obviously flawed in the aftermath of major output crises. Several members—and, in particular, those with the largest output declines during the crisis—are estimated to have near-zero or, even more absurdly, negative potential growth. These oddities stem from the excessive weight given to declining output during the crisis. In other words, potential growth tracks actual output growth to an unrealistically high degree. Neither Consensus Forecasts (an average of several private sector forecasts) nor model-based estimates by the OECD put growth over the next decade or two at less than 1–1½ percent. The flaws in the agreed methodology have serious operational implications, because underestimating potential growth causes an excessive required improvement in the structural fiscal deficit.

- **Recommendation:** Change the estimation method for potential output growth to ensure that it is not overly sensitive to step declines in the level of output.

### 2.6 Improving the composition of fiscal revenues and expenditures

Regarding the composition of revenues, there is increasing evidence that the priority in reducing taxation for the purpose of fostering the growth of output and employment is to cut taxes on labour first, on consumption second, and on property last (Arnold and others, 2011). In most European countries, labour is overtaxed and property is undertaxed. In view of unacceptably high youth unemployment and high fiscal deficits, it is important to focus on well targeted policies: cuts to social security contributions for youth would be a good place to start.  

- **Recommendation:** Cut social security contributions for youth. Revenue-neutral reforms should reduce labour taxation financing it by higher taxes on property.

The composition of public spending should aim at fostering the economy’s growth potential, by increasing the share of expenditures on items such as infrastructure and education, and reforming health care and pensions. Indeed, proponents of the secular stagnation hypothesis are right when they emphasize the need for greater infrastructure investment, especially for maintenance, which generates jobs quickly and where the risk of creating new “white elephants” is more limited. As noted above, however, most advanced economies will need to rein in total public expenditures to recognize that we are not as well off as we had previously thought.

- **Recommendation:** Increase the share of growth-promoting items, such as infrastructure and education, in total expenditures.

Historical evidence suggests that fiscal adjustments based upon across-the-board expenditure cuts are less durable than those based upon strategic choices regarding which public goods and services are best provided by the state and which ones provide insufficient value for money. To that end, it is useful to

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4 IMF (2014) provides evidence on the merits of this policy, based on case studies for several advanced economies.
undertake expenditure reviews seeking to identify which programs, subsidies, and public entities may have become obsolete or redundant, perhaps as a result of evolving needs or costs, or duplication. In turn, such reviews are more likely to be successfully implemented when they are conducted as a team effort involving many parts of government and civil society, when they are politically owned at all levels of government, and when their results are carefully explained to the public at large. These points are best illustrated by Canada’s fiscal adjustment successfully undertaken in the mid-1990s (see Sancak and others, 2011).

- Recommendation: Encourage all Eurozone countries to undertake expenditure reviews and to implement their proposals.

3. LONGER-TERM POLICY REFORMS

Economic policymaking and the agenda for reforming Europe’s architecture have become overly driven by short-term developments in the financial markets and the media, rather than a long-run vision for a more integrated Europe. It is time for policymakers to return to the task of building a more united Europe through ambitious initiatives. Design and implementation will take years or possibly decades but need to start now. The remainder of this note points to possible initiatives that require going beyond short term political considerations. Common to these recommendations is the view that “more Europe” and enhanced international risk-sharing and economic integration both within Europe and with the rest of the world economy are key elements of the solution.

3.1 European bonds, revenues, and expenditures

European bonds, jointly guaranteed by the member countries, have been put forward as a way to reduce risk premia on government borrowing and to build a more united European Union. For such bonds to be credible, they would need to be backed up by a real ability to collect sizable European tax revenues. Correspondingly, decisions on expenditures financed by such revenues would of course have to be approved by the democratically elected European Parliament (not unlike its current role with respect to the EU budget). A possible candidate for such European revenues would be a truly Europe-wide value added tax (VAT) on a significant scale, with common rates and closely coordinated revenue administration. This would have the added benefit of reducing VAT tax fraud and facilitating intra-EU trade by reducing the administrative burden for firms doing business in the common trade area (Baldwin, 2007; Keen and Smith, 1996).

- Recommendation: Build more significant, truly European revenues, to support expenditures and bonds issued at the European level.

3.2 Improving the terms of European official lending

Another dimension of a more integrated Europe relates to the need to help members restore the health of their economies. For highly indebted countries to regain access to market financing, investors need to be convinced that debts are sustainable. To attain that objective, further improvements in the terms of official lending (for example, lower interest rates or longer repayment periods) may well be required during the years ahead. A frequent counterargument relates to the possibility of moral hazard—lower incentives to reform. However, in light of major observed losses of output and employment, as well as significant accompanying reforms, such counterargument does not seem persuasive.

- Recommendation: Signal readiness to improve the terms of European official lending further to highly indebted countries, conditional on continued reforms.

Moreover, to protect the borrowing country from the risk of low growth, it would be helpful to include indexation to GDP growth in the lending terms, whereby borrowers pay a higher interest rate when they
experience strong growth and a lower rate when their growth is weak. (This last point does not change the net present value of the debt, but helps to align the borrower’s obligations to its capacity to repay, thereby improving international risk sharing).

- **Recommendation:** Index the interest rate on official lending to the borrowing country’s GDP growth.

### 3.3 Coordinated launch of Growth-Indexed Bonds issued on markets

More generally, the global economic and financial crisis has driven home the point that declines in economic growth can quickly worsen public debt/GDP ratios, thereby raising concerns about countries’ fiscal solvency. One way of reducing the risk of excessive increases in debt/GDP ratios and of fostering international risk-sharing through private market mechanisms is for individual countries to introduce indexation to economic growth in otherwise standard sovereign bonds issued on financial markets. Specifically, individual countries could issue bonds paying a coupon that is larger the higher the domestic economic growth rate. Countries would thus pay higher interest when they experience strong economic growth, but lower interest when their growth is weak. The higher the gross holdings of growth-indexed government debt by non-residents, the greater the international risk sharing benefits.

Thus far, growth indexation in sovereign bonds has only been used in debt exchanges (e.g., Argentina in 2002). In principle, however, growth indexed bonds can be issued in normal times, following similar procedures as for inflation-indexed bonds, which have become increasingly common in many countries, including European ones.

If such bonds are so beneficial, why have they not gained greater prominence? A precondition is trust in the quality of official statistics and the independence of national statistical agencies from political interference (in this regards, Eurostat can play a helpful role). Moreover, innovation in financial markets is often hampered by the need for borrowers to pay a novelty premium: investors are willing to invest in new financial instruments only if they are compensated for the possibility that such instruments may turn out to be illiquid and thus difficult to sell. To reduce the novelty premium, it would be helpful for several governments to coordinate on issuing similarly designed growth-indexed bonds within a few weeks of each other, along the lines of the process used to introduce collective action clauses in sovereign bonds in the early 2000s. By increasing the size of the market, this would alleviate concerns regarding liquidity, and spread the novelty cost more widely across the various issuing countries.

- **Recommendation:** Encourage governments of EU countries to coordinate issuance of growth-indexed bonds.

### 3.4 Enhanced economic integration with developing and emerging economies

Rapid economic and population growth in the developing and emerging economies over the next decades represents an opportunity for the advanced economies’ ageing societies. To reap its potential benefits, however, Europe cannot afford to miss the boat by delaying preparation. Policies and international agreements are needed to foster mutually beneficial trade and greater integration of the markets for labor as well as physical and entrepreneurial capital. To give just a few examples based on large-scale trends already well underway in other parts of the world: sizable communities of U.S. retirees hosted by several Central American countries; “medical tourism” whereby advanced economy residents take advantage of lower health care costs in clinics located in emerging economies and staffed with doctors trained in advanced economies; investor visas for rich individuals or entrepreneurs from emerging economies to establish residence in advanced economies, and to promote trade links with their countries of origin or

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5 For a comprehensive discussion regarding the benefits of growth-indexed bonds and ways of overcoming potential obstacles to their issuance, see Borensztein and Mauro (2004).
eventually return there with improved skills that will in turn foster development and help establish new markets for advanced economy goods and services.

- **Recommendation:** Prepare for the vastly changing economic landscape of the next decades by increasing trade and market integration with emerging and developing economies. For example, refund old-age care or medical services for citizens who choose to be treated at lower cost in emerging economies; establish a EU-wide, expanded program for investor visas, possibly with lower thresholds for investors from sub-Saharan Africa.
4. APPENDIX 1

This appendix provides background to Figure 2 and the related discussion, by outlining how countries were selected to be part of the sample and how they were allocated to each group, solely based upon the observed behavior of their GDP since 2000. All data refer to real gross domestic product, set at 100 in 2007, and are drawn from the International Monetary Fund’s World Economic Outlook database, October 2014 published vintage. The “cumulative output loss during the crisis” is the sum of the gap between 2008 and 2007 GDP, plus the gap between 2009 and 2007 GDP, expressed in percentage points of 2007 GDP. (For the few countries where the crisis began a year later, the whole timing is moved by one year. For the few countries where only one year’s output was below the previous peak, the output loss is computed for that single year only.)

The sample was selected to consist of all advanced economies worldwide as well as emerging economies in Europe that experienced a decline in output in 2008 or 2009. Specifically, it includes all economies with per capita GDP above US$11,000 in 2007, plus Bulgaria, Romania, and Serbia, and excluding Singapore, Taiwan, small island economies and large, non-European oil producers. The sample thus comprises 35 countries. These were allocated to the following groups:

“Unscathed:” real GDP growth did not turn negative at any point during the crisis. This group consists of Australia, Korea, and Poland (to conserve space, graphs are not included).

“Growth tragedies:” real GDP level lower in 2009 than in 2007 and lower in 2014 than in 2009. That is, not only did output fall during the initial crisis, but it has continued falling since then. Consists of Croatia, Greece, Italy, Slovenia, Portugal, and Spain.

“Moderate growers, now halted:” average real GDP growth prior to the crisis (2000–07) below 4 percent and post-crisis growth (2009–14) less than half the pre-crisis rate. Cyprus, Finland, Hungary, Netherlands.

“Moderate growers, moderate recession:” growth prior to the crisis (2000–07) below 4 percent, post-crisis growth (2009–14) more than half the pre-crisis rate, and cumulative output loss during the crisis less than 4 percentage points of GDP. Belgium, Canada, France, Malta, New Zealand, Norway, Switzerland, United States.

“Moderate growers, major recession:” growth prior to the crisis (2000–07) below 4 percent, post-crisis growth (2009–14) more than half the pre-crisis rate, and cumulative output loss during the crisis more than 4 percentage points of GDP. Austria, Denmark, Germany, Japan, Sweden, United Kingdom.


5. APPENDIX 2

To provide background on cross country differences in the difficulty they will face to reduce the fiscal deficit in the years ahead, Appendix Figure 2.1 reports the net present value of the additional (cumulative) spending on health care and pensions that is projected to occur in 2014–50, compared with the levels in 2013, and expressed as a share of 2013 GDP.

Country rankings by this measure are strikingly different from those based on conventional government debt ratios. The highest net present value of additional age-related spending is projected in the Netherlands and the United States. Among the lowest are the Czech Republic, Denmark, France, Italy, and Sweden, where reforms in past years have reduced the projected increase in age-related spending. Japan fares better than average by this metric. Countries in the top, right-hand quadrant (Belgium, United States) both have higher-than-average government debt ratios at end-2014 and larger-than-average increases in age-related spending coming up in the next couple of decades. Countries in the bottom, left-hand quadrant (Czech Republic, Denmark, Germany, Slovak Republic, and Sweden) fare well, compared with the average, on both government debt ratios and projected age-related spending. A similar logic applies to interpreting the remaining two quadrants.

Appendix Figure 2.1: Net present value of age-related spending change (2014-2050) in percent of 2013 GDP
REFERENCES


- Baldwin, R., 2007, VAT Fraud, Parts 1-5, VoxEU, June.

- Blanchard, Olivier, Giovanni Dell’Ariccia, Paolo Mauro, 2013, “Rethinking Macro Policy II: Getting Granular,” IMF Staff Discussion Note 13/3.


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